MITSUBISHI

GRAPHIC OPERATION TERMINAL
GOT

GRAPHIC OPERATION TERMINAL

GOT1000

GT15 User's Manual



● SAFETY PRECAUTIONS ●

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.
The precautions given in this manual are concerned with this product.
In this manual, the safety precautions are ranked as "DANGER" and "CAUTION".

DANGER	**Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.**
CAUTION	**Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.**

Note that the CAUTION level may lead to a serious accident according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[DESIGN PRECAUTIONS]

DANGER

- Some failures of the GOT, communication unit or cable may keep the outputs on or off.
  An external monitoring circuit should be provided to check for output signals which may lead to a serious accident.
  Not doing so can cause an accident due to false output or malfunction.
- If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative.
  For bus connection: The CPU becomes faulty and the GOT becomes inoperative.
  For other than bus connection: The GOT becomes inoperative.
  A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.
  Not doing so can cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that may cause a serious accident.
  An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning.
  Failure to observe this instruction may result in an accident due to incorrect output or malfunction.

[DESIGN PRECAUTIONS]

DANGER

- Incorrect operation of the touch switch(s) may lead to a serious accident if the GOT backlight is gone out.
  When the GOT backlight goes out, the POWER LED flickers (green/orange) and the display section turns black and causes the monitor screen to appear blank, while the input of the touch switch(s) remains active.
  This may confuse an operator in thinking that the GOT is in "screensaver" mode, who then tries to release the GOT from this mode by touching the display section, which may cause a touch switch to operate.
  Note that the following occurs on the GOT when the backlight goes out.
  •The POWER LED flickers (green/orange) and the monitor screen appears blank
- The display section of the GT1595-X is an analog-resistive type touch panel.
  If you touch the display section simultaneously in 2 points or more, the switch that is located around the center of the touched point, if any, may operate.
  Do not touch the display section in 2 points or more simultaneously.
  Doing so may cause an accident due to incorrect output or malfunction.

CAUTION

- Do not bundle the control and communication cables with main-circuit, power or other wiring.
  Run the above cables separately from such wiring and keep them a minimum of 100mm (3.94in.) apart.Not doing so noise can cause a malfunction.
- Do not press the GOT display section with a pointed material as a pen or driver.
  Doing so can result in a damage or failure of the display section.

[MOUNTING PRECAUTIONS]

DANGER

- Be sure to shut off all phases of the external power supply used by the system before mounting or removing the GOT main unit to/from the panel.
  Not doing so can cause the unit to fail or malfunction.
- Be sure to shut off all phases of the external power supply used by the system before mounting or removing the communication unit, printer unit, option function board or multi-color display board onto/from the GOT.
  Not doing so can cause the unit to fail or malfunction.
- When installing the multi-color display board, wear an earth band etc. to avoid the static electricity.Not doing so can cause a unit corruption.

[MOUNTING PRECAUTIONS]

⚠CAUTION

- Use the GOT in the environment that satisfies the general specifications described in this manual. Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- When mounting the GOT to the control panel, tighten the mounting screws in the specified torque range.
  Undertightening can cause the GOT to drop, short circuit or malfunction.
  Overtightening can cause a drop, short circuit or malfunction due to the damage of the screws or the GOT.
- When loading the communication unit or printer unit to the GOT, fit it to the connection interface of the GOT and tighten the mounting screws in the specified torque range.
  Undertightening can cause the GOT to drop, short circuit or malfunction.
  Overtightening can cause a drop, failure or malfunction due to the damage of the screws or unit.
- When mounting the multi-color display board onto the GOT, tighten the mounting screws within the specified torque range.
  Loose tightening may cause the unit and/or GOT to malfunction due to poor contact.
  Overtightening may damage the screws, unit and/or GOT; they might malfunction.
- Push the option function board onto the corresponding connector until it clicks, so that it will be secured firmly.
- Push the multi-color display board onto the corresponding connector so that it will be secured firmly.
- When inserting a CF card into the GOT, push it into the insertion slot until the CF card eject button will pop out.
  Failure to do so may cause a malfunction due to poor contact.
- When inserting/removing a CF card into/from the GOT, turn the CF card access switch off in advance.
  Failure to do so may corrupt data within the CF card.
- When removing a CF card from the GOT, make sure to support the CF card by hand, as it may pop out.
  Failure to do so may cause the CF card to drop from the GOT and break.
- Operate and store the GOT in environments without direct sunlight, high temperature, dust, humidity, and vibrations.

[WIRING PRECAUTIONS]

DANGER

- Be sure to shut off all phases of the external power supply used by the system before wiring.
  Failure to do so may result in an electric shock, product damage or malfunctions.

CAUTION

- Always ground the FG terminal, LG terminal, and protective ground terminal of the GOT power to the protective ground conductors dedicated to the GOT.
  Not doing so may cause an electric shock or malfunction.
- Terminal screws which are not to be used must be tightened always at torque 0.5 to 0.8 N·m.
  Otherwise there will be a danger of short circuit against the solderless terminals.
- Use applicable solderless terminals and tighten them with the specified torque.
  If any solderless spade terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Correctly wire the GOT power supply section after confirming the rated voltage and terminal arrangement of the product.
  Not doing so can cause a fire or failure.
- Tighten the terminal screws of the GOT power supply section in the specified torque range. Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction due to the damage of the screws or the GOT.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT. Not doing so can cause a fire, failure or malfunction.
- The module has an ingress prevention label on its top to prevent foreign matter, such as wire offcuts, from entering the module during wiring.
  Do not peel this label during wiring.
  Before starting system operation, be sure to peel this label because of heat dissipation.
- Plug the communication cable into the connector of the connected unit and tighten the mounting and terminal screws in the specified torque range.
  Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.
- Plug the QnA/ACPU/Motion controller (A series) bus connection cable by inserting it into the connector of the connected unit until it "clicks".
  After plugging, check that it has been inserted snugly.
  Not doing so can cause a malfunction due to a contact fault.

[TEST OPERATION PRECAUTIONS]

DANGER

- Before performing the test operations of the user creation monitor screen (such as turning ON or OFF bit device, changing the word device current value, changing the settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully and make yourself familiar with the operation method.
  During test operation, never change the data of the devices which are used to perform significant operation for the system.
  False output or malfunction can cause an accident.

[STARTUP/MAINTENANCE PRECAUTIONS]

DANGER

- When power is on, do not touch the terminals.
  Doing so can cause an electric shock or malfunction.
- Connect the battery correctly.
  Do not discharge, disassemble, heat, short, solder or throw the battery into the fire.
  Incorrect handling may cause the battery to generate heat, burst or take fire, resulting in injuries or fires
- Before starting cleaning or terminal screw retightening, always switch off the power externally in all phases.
  Not switching the power off in all phases can cause a unit failure or malfunction.
  Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

[STARTUP/MAINTENANCE PRECAUTIONS]

⚠CAUTION

- Do not disassemble or modify the unit.
  Doing so can cause a failure, malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly.
  Doing so can cause a unit malfunction or failure.
- The cables connected to the unit must be run in ducts or clamped.
  Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to the unit, do not hold and pull the cable portion.
  Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock.
  A module damage may result.
- Do not drop or give an impact to the battery mounted to the unit.
  Doing so may damage the battery, causing the battery fluid to leak inside the battery.
  If the battery is dropped or given an impact, dispose of it without using.
- Before touching the unit, always touch grounded metal, etc. to discharge static electricity from human body, etc.
  Not doing so can cause the unit to fail or malfunction.

[BACKLIGHT REPLACEMENT PRECAUTIONS]

⚠DANGER

- Be sure to shut off all phases of the external power supply of the GOT (and the PLC CPU in the case of a bus topology) and remove the GOT from the control panel before replacing the backlight (when using the GOT with the backlight replaceable by the user).
  Not doing so can cause an electric shock.
  Replacing a backlight without removing the GOT from the control panel can cause the backlight or control panel to drop, resulting in an injury.

[BACKLIGHT REPLACEMENT PRECAUTIONS]

⚠CAUTION

- Wear gloves for the backlight replacement when using the GOT with the backlight replaceable by the user.
  Not doing so can cause an injury.
- Before replacing a backlight, allow 5 minutes or more after turning off the GOT when using the GOT with the backlight replaceable by the user.
  Not doing so can cause a burn from heat of the backlight.

[DISPOSAL PRECAUTIONS]

⚠CAUTION

- When disposing of the product, handle it as industrial waste.

[TRANSPORTATION PRECAUTIONS]

⚠CAUTION

- When transporting lithium batteries, make sure to treat them based on the transport regulations.
  (Refer to Appendix 3 for details of the regurated units.)
- Make sure to transport the GOT main unit and/or relevant unit(s) in the manner they will not be exposed to the impact exceeding the impact resistance described in the general specifications of this manual, as they are precision devices.
  Failure to do so may cause the unit to fail.
  Check if the unit operates correctly after transportation.

REVISIONS

The manual number is given on the bottom left of the back cover.

Print Date	Manual Number	Revision
Oct., 2004	SH(NA)-080528ENG-A	First edition
Mar., 2005	SH(NA)-080528ENG-B	Compatible with GT Designer2 Version2.09K [Partial corrections] Chapter 6, Section 7.3.2, 8.2 to 8.6 → 8.2 to 8.4, 8.4.3, Section 9.1 to 9.3 → 9.1 to 9.2, Section 10.1 to 10.6 → 10.1 to 10.5, Section 12.1 to 12.6 → 12.1 to 12.5, Section 13.1, 13.2 to 13.6 → 13.3 to 13.7, Section 14.1 to 14.2 → 14.1, Section 15.1 to 15.2 → 15.1, Section 16.1 to 16.2 → 16.1, Chapter 18, Section 18.6 → 18.3, 18.3 to 18.5 → 18.4 to 18.6, Section 19.1, 19.2 [Partial additions] SAFETY PRECAUTIONS, Section 2.1, 2.2.2, Section 3.2, Section 4.1, 4.2, 4.3, Section 5.3, Section 7.3.1, 7.5.1, 7.5.2, Section 8.3, Appendix 1, 2, 4 [Additions] Section 10.6, Section 12.6, Section 13.2
Apr., 2005	SH(NA)-080528ENG-C	[Partial corrections] Section 4.1, 4.2, 4.3, 7.1.2, 7.5.2, 18.6, Appendix 1, Chapter 5 to 19 → 6 to 20, Appendix 2 to 4 → 3 to 5 [Additions] Chapter 5, Appendix 2
Sep., 2005	SH(NA)-080528ENG-D	Compatible with GT Designer2 Version 2.18U [Partial corrections] Chapter 1, Section 1.1, 1.2, Section 2.1, 2.2, 2.2.1, 2.2.2, Section 4.1 to 4.4, Section 5.1, 5.1.3, 5.2.5, 5.4.2, Section 6.3, Section 7, 7.4, Section 8.1, 8.1.1, 8.1.2, 8.2, 8.3, 8.5.1, 8.5.2, 8.6.2, 8.7.3, 8.7.4, 8.11, 8.11.1, Section 9, 9.1, 9.2, 9.3.1, to 9.3.3, Section 10, 10.1.2 to 10.1.4, 10.2.2, 10.2.3, Chapter 11, 11.1, 11.1.1 to 11.1.3, 11.2.2, 11.2.3, 11.3.1, 11.3.2, 11.4.2, 11.5.1 to 11.5.3, Section 12.1.1 to 12.1.3, Section 13, 13.1.2, 13.1.3, 13.2.1, 13.2.2, 13.2.4, 13.3.2 to 13.3.4, 13.4.2, 13.5.2, 13.6.1 to 13.6.3, 13.7, 13.7.1, 13.7.2, 13.7.4, 13.7.5, Chapter 14, 14.1.2, 14.2.1, 14.3.1 to 14.3.3, 14.4.2, 14.5.2, 14.6.2, 14.7.1, 14.7.2, Section 15.1.2, Section 16.1.3, Section 17.1.3, Chapter 18, 18.1, 18.2, 18.3, 18.3.1, 18.3.2, 18.4, Section 20.1, 20.2, Appendix 5 [Partial additions] Section 5.3.2, 5.3.3, Section 6.2, 6.5, Section 8.4.1, 8.7.2, 8.8.1, 8.10.1, 8.10.2, Section 10.2.1, Section 11.2.1, 11.3.3, Section 13.1.5, Section 14.1.1, Section 19.2, 19.4, 19.5, 19.6.1, 19.6.2, Appendix 1, 3 [Additions] Section 3.2.1 to 3.2.4, 3.3.1, 3.3.2, Section 4.1, Section 8.5.3, Section 11.6, 11.8, Section 13.8, 13.9, 13.10, Section 18.5 Section 4.1 to 4.3 → Section 4.2 to 4.4 Section 11.6 → Section 11.7

The manual number is given on the bottom left of the back cover.

Print Date	Manual Number	Revision
Jan., 2006	SH(NA)-080528ENG-E	Compatible with GT Designer2 Version2.27D Partial corrections SAFETY PRECAUTIONS, Chapter 1, Section 2.1, Section 8.1.1, 8.5 to 8.11→8.6 to 8.12, Section 9.2, 9.3, Section 10.1.3, Section 11.1, 11.7.2, Section 13.7.4, 13.10.4 Partial additions Section 2.2, Section 6.3, Section 13.1.5, 13.2.4, Chapter 14, Section 19.4, Section 20.2, Appendix 1, 3, 5 Additions Section 8.5, Section 14.8, 14.9
Jun., 2006	SH(NA)-080528ENG-F	Compatible with GT Designer2 Version2.32J Partial corrections Chapter 1, Section 1.1, 2.1, 2.2, 4.1, 4.2, 4.3, 4.4, 5.3.1, 5.4.2, 8.4, 8.5.2, 8.9, 9.3, 11.2.2, 11.3.2, 11.4.2, 11.5.2, 11.7.2, 11.8.2, 12.1.3, 13.1.5, 13.2.2, 13.2.3, 13.2.4, 13.3.1, 13.3.3, 13.4.2, 13.4.3, 13.5.2, 13.5.3, 13.6.2, 13.6.3, 13.7.2, 13.7.3, 13.8.2, 13.8.3, 13.9.2, 13.10.2, 13.10.3, 14.3.2, 14.4.2, 14.5.2, 14.6.2, 14.7.2, 14.9, 18.3.1, 18.4, 18.5.2 Partial additions Chapter 1, Section 2.2.1, 2.2.2, 3.2.1 ~ 3.2.4, 3.3.1, 3.3.2, 5.3.2, 5.3.3, 6.2, 6.3, 7.1, 7.4, 8.1.2, 8.3.1, 8.7, 8.8, 8.10, 8.11, 8.12, 8.13, 9.2, 9.3.1, 10.1.3, Chapter 11, Section 11.1.1, 11.1, 2, 11.5.1, 11.7.1, 11.8.1, Chapter 14, Section 14.1.1, 14.2.1, 19.6.1, 20.2, Appendix 1, 3, 5 Additions Section 3.2.5, 4.5, 5.3.4, 8.6, 11.9 ~ 11.11, 13.11, 14.8
Sep., 2006	SH(NA)-080528ENG-G	Partial corrections Section 5.1.1, 5.2.4, 5.3.2, 5.3.3, 5.3.6, 5.4.2
Nov., 2006	SH(NA)-080528ENG-H	Compatible with GT Designer2 Version2.43V. Partial corrections SAFETY PRECAUTIONS, Section 2.2.2, 3.1, 3.2, 3.3, 4.2, 4.3, 4.5, Chapter 7, Section 8.1→8.6, 8.2→8.7, 8.3→8.8, 8.4→8.14, 8.5→8.3, 8.6→8.4, Section 8.6.2, 8.7→8.1, 8.7.2, 8.7.3, 8.8→8.2, 10.1.3, 11.2.1, 11.3.1, 11.7.1, 11.7.2, 11.8.1, 12.1.3, 14.9.2, 14.9.3, 18.4, Chapter 20, Section 20.2 Partial additions Section 2.2.1, 2.2.2, 3.2.2, 3.2.3, 3.3.2, 5.3.1, 5.3.4, 6.3, 9.2, Chapter 11, Section 11.1.1, 11.1.3, 11.3.3, 13.1.1, 13.1.2, 13.1.5, 13.2.1, 13.2.2, 13.2.3, 13.2.4, 13.3.1, 13.3.2, 13.3.4, 13.4.1, 13.4.2, 13.4.3, 13.5.2, 13.5.3, 13.6.2, 13.7.2, 13.8.2, 13.9.2, 13.9.3, 13.10.1, 13.10.2, 13.10.3, 13.10.4, 13.11.2, 13.12.3, 14.3.1, 14.3.3, Chapter 17, Section 17.1.3, 18.3, 18.3.1, 19.6.2, Appendix 1, 3, 5 Additions Section 8.5, 13.12

The manual number is given on the bottom left of the back cover.

Print Date	Manual Number	Revision
Feb., 2007	SH(NA)-080528ENG-I	Compatible with GT Designer2 Version2.47Z. Partial corrections Section 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 6.1, 6.2, 7.2, 7.6, 7.6.1, 7.6.2, 10.1.3, 11.2.3, 13.1.2, 20.3.2, Appendix 1 Partial additions Section 2.2.2, 5.2.3, 5.3.4, 6.2, 6.3, 8.5, 8.5.1, 8.5.2, 8.6.3, 14.7.1 Additions Section 8.5.3, 8.5.4, 8.6.4, Appendix 5
May, 2007	SH(NA)-080528ENG-J	Compatible with GT Designer2 Version 2.58L Partial corrections Section 2.2, 3.2.3, 3.2.5, 3.3, 5.4.1, 6.3, 7.2, 8.5→8.7, 8.6→8.8, 8.7→8.9, 8.8→8.10, 8.9→8.11, 8.10→8.12, 8.11→8.13, 8.12→8.14, 8.16.1, 9.2, 10.1.3, 10.2.3, 11.7.1, 11.7.2, 11.7.3, 13.5.2, 13.5.3, 14.1.1, 14.1.2, 14.7, 20.3.2, Appendix 3, 6 Partial additions Section 2.2.1, 2.2.2, 3.2.1, 4.5, 5.2.3, 5.3.1, 5.3.4, 8.8, 11.7.1, 13.5.1, 13.5.4, Chapter 14, 20.3.1, Appendix 1, 6 Additions Section 8.5, 8.6, 11.2, 14.11
Jul., 2007	SH(NA)-080528ENG-K	Compatible with GT Designer2 Version 2.62R Partial corrections Section 14.7.1, 19.6.1, 19.6.2 Partial additions Section 9.2, 14.1, 20.3.2
Nov., 2007	SH(NA)-080528ENG-L	Compatible with GT Designer2 Version 2.73B Partial corrections Section 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 8.1.1, 8.1.2, 8.2.2, 8.3.2, 8.4.2, 8.5.2, 8.6.2, 8.8.2, 8.10.1,8.10.2, 8.16.1, 8.16.2, 13.7.2, 13.8.2, 14.7.1, 14.7.3, 19.6.2, Appendix 3 Partial additions Section 1.2, 2.1, 2.2.2, 3.2, 5.3.1, 9.2, 10.1.3, Chapter 11, 11.12.1, 11.12.2, 11.12.3, 13.2.1, 13.3.1,13.10.2, Chapter 18, 18.1. 18.2, 18.3.1 Additions Section 11.13

The manual number is given on the bottom left of the back cover.

Print Date	Manual Number	Revision
Feb., 2007	SH(NA)-080528ENG-M	Compatible with GT Designer2 Version 2.77F Partial corrections Section 1.2 Partial additions SAFETY PRECAUTIONS, Section 2.2.2, 3.2, 5.3, 6.3, 8.1, 9.2, Chapter 14, Section 20.3.2, Appendix 1, 3

Japanese Manual Version SH-080507-Q

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

© 2004 MITSUBISHI ELECTRIC CORPORATION

INTRODUCTION

Thank you for choosing the Mitsubishi Graphic Operation Terminal.
Before using the equipment, please read this manual carefully to use the equipment to its optimum.

CONTENTS

SAFETY PRECAUTIONS . . . . . A - 1
REVISIONS . . . . . A - 8
INTRODUCTION . . . . . A - 12
CONTENTS . . . . . A - 12
ABOUT MANUALS . . . . . A - 21
ABBREVIATIONS AND GENERIC TERMS . . . . . A - 22
HOW TO READ THIS MANUAL . . . . . A - 26
PACKING LIST . . . . . A - 27

1. OVERVIEW 1 - 1 to 1 - 6

1.1 Features 1 - 4
1.2 Rough Pre-operation Procedure 1 - 5

2. SYSTEM CONFIGURATION 2 - 1 to 2 - 20

2.1 Overall Configuration 2 - 1
2.2 Component List 2 - 2
2.2.1 GOT . . . . . 2 - 5
2.2.2 Option . . . . . 2 - 7

3. SPECIFICATIONS 3 - 1 to 3 - 15

3.1 General Specifications 3 - 1
3.2 Performance Specifications 3 - 2
3.2.1 GT1595-X . . . . . 3 - 2
3.2.2 GT1585V-S, GT1585-S . . . . . 3 - 5
3.2.3 GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN . . . . . 3 - 7
3.2.4 GT1565-V, GT1562-VN . . . . . 3 - 10
3.2.5 GT1555-V, GT1555-Q, GT1550-Q . . . . . 3 - 12
3.3 Power Supply Specifications 3 - 14
3.3.1 For GOTs powered from the 100 to 240VAC power supply . . . . . 3 - 14
3.3.2 For GOTs powered from the 24VDC power supply . . . . . 3 - 15

4. PART NAME AND SETTINGS 4 - 1 to 4 - 12

4.1 Part Names and Settings of the GT1595 4 - 1
4.2 Part Names and Settings of the GT1585 4 - 3
4.3 Part Names and Settings of the GT157 4 - 6

4.4 Part Names and Settings of the GT156 4 - 9
4.5 Part Names and Settings of the GT155 4 - 11

5. EMC AND LOW VOLTAGE DIRECTIVE 5 - 1 to 5 - 24

5.1 Requirements to Meet EMC Directive 5 - 1
5.1.1 EMC directive . . . . . 5 - 2
5.1.2 Control panel . . . . . 5 - 4
5.1.3 Noise filter (power supply line filter) . . . . . 5 - 5
5.2 Requirements for Conpliance with the Low Voltage Directive 5 - 6
5.2.1 Standard subject to GOT . . . . . 5 - 6
5.2.2 Power supply . . . . . 5 - 6
5.2.3 Control panel . . . . . 5 - 7
5.2.4 Grounding . . . . . 5 - 7
5.2.5 External wiring . . . . . 5 - 8
5.3 EMC Directive-Compliant System Configuration 5 - 9
5.3.1 GOT . . . . . 5 - 9
5.3.2 Connection method . . . . . 5 - 10
5.3.3 When the communication unit is used . . . . . 5 - 11
5.3.4 When the option unit is used . . . . . 5 - 13
5.3.5 When the option is used . . . . . 5 - 13
5.3.6 Cables . . . . . 5 - 14
5.4 Precautions for Wiring/Connecting the EMC Directive-Compliant Product 5 - 15
5.4.1 Power and ground wires wiring method . . . . . 5 - 15
5.4.2 Processing connection cables . . . . . 5 - 18
5.4.3 Grounding the cable . . . . . 5 - 24

6. INSTALLATION 6 - 1 to 6 - 12

6.1 Control Panel Inside Dimensions for Mounting GOT 6 - 1
6.2 Panel Cutting Dimensions 6 - 2
6.3 Mounting Position 6 - 3
6.4 Control Panel Inside Temperature and Mounting Angle 6 - 11
6.5 Installation Procedure 6 - 11

7. WIRING 7 - 1 to 7 - 16

7.1 Power Supply Wiring 7 - 3
7.2 Wiring to GOT Power Section 7 - 4
7.3 Grouding 7 - 6
7.3.1 Grounding the GOT . . . . . 7 - 6
7.3.2 Wiring-related malfunction causes and the measures examples . . . . . 7 - 9
7.4 Panel Inside Wiring, Panel Outside Wiring 7 - 11
7.4.1 Panel inside wiring . . . . . 7 - 11
7.4.2 Panel outside wiring . . . . . 7 - 11
7.5 Attaching Surge Suppressor for Control Equipment 7 - 12
7.6 Grounding Extension Units 7 - 13

7.6.1 Wiring FG cable of bus connection cable . . . . . 7 - 13
7.6.2 Wiring FG cable of CF card extension unit connection cable . . . . . 7 - 15

8. OPTION 8 - 1 to 8 - 60

8.1 Communication Unit 8 - 1
8.1.1 Applicable communication unit . . . . . 8 - 1
8.1.2 Installing procedure . . . . . 8 - 3
8.1.3 Installing multiple extension units in layers . . . . . 8 - 15
8.2 RS-422 Conversion Unit 8 - 18
8.2.1 Applicable RS-422 conversion unit . . . . . 8 - 18
8.2.2 Installing procedure . . . . . 8 - 18
8.3 Printer Unit 8 - 19
8.3.1 Printer unit type . . . . . 8 - 19
8.3.2 Installing procedure . . . . . 8 - 19
8.4 Video/RGB Unit 8 - 23
8.4.1 Video/RGB unit types . . . . . 8 - 23
8.4.2 Installing procedure . . . . . 8 - 23
8.5 External I/O Unit 8 - 26
8.5.1 Applicable external I/O unit . . . . . 8 - 26
8.5.2 Installation procedure . . . . . 8 - 26
8.6 Sound Output Unit 8 - 28
8.6.1 Applicable sound output unit . . . . . 8 - 28
8.6.2 Installation procedure . . . . . 8 - 28
8.7 CF Card Unit and CF Card Extension Unit 8 - 31
8.7.1 Applicable CF card unit and CF card extension unit . . . . . 8 - 31
8.7.2 Installing on GOT . . . . . 8 - 31
8.7.3 Installing on control panel . . . . . 8 - 33
8.7.4 Protective structure for CF card extension unit . . . . . 8 - 34
8.8 CF Card 8 - 35
8.8.1 Applicable CF card . . . . . 8 - 35
8.8.2 CF card inserting/removing method with CF card interface of GOT . . . . . 8 - 36
8.8.3 CF card inserting/removing method with CF card unit . . . . . 8 - 40
8.8.4 CF card inserting/removing method with CF card extension unit . . . . . 8 - 42
8.9 Memory Card Adaptor 8 - 44
8.9.1 Applicable memory card adaptor . . . . . 8 - 44
8.9.2 Installing procedure . . . . . 8 - 44
8.10 Option Function Board 8 - 45
8.10.1 Applicable option function board . . . . . 8 - 45
8.10.2 Installing procedure . . . . . 8 - 45
8.11 Battery 8 - 47
8.11.1 Applicable battery . . . . . 8 - 47
8.11.2 Battery specifications . . . . . 8 - 47
8.11.3 Battery replacement procedure . . . . . 8 - 47
8.11.4 Battery life . . . . . 8 - 48
8.12 Protective Sheet 8 - 49
8.12.1 Applicable protective sheet . . . . . 8 - 49

8.12.2 Installing procedure . . . . . 8 - 50
8.13 Protective cover for oil 8 - 51
8.13.1 Applicable protective cover for oil . . . . . 8 - 51
8.13.2 Installation procedure . . . . . 8 - 51
8.14 USB Environmental Protection Cover 8 - 54
8.14.1 Applicable USB environmental protecton cover . . . . . 8 - 54
8.14.2 Installing procedure . . . . . 8 - 54
8.15 Stand 8 - 56
8.15.1 Applicable stand . . . . . 8 - 56
8.15.2 Installing procedure . . . . . 8 - 56
8.16 Attachment 8 - 58
8.16.1 Applicable attachment . . . . . 8 - 58
8.16.2 Installing procedure . . . . . 8 - 58
8.17 Multi-Color Display Board 8 - 59
8.17.1 Applicable multi-color display board . . . . . 8 - 59
8.17.2 Installing procedure . . . . . 8 - 60

9. UTILITY FUNCTION 9 - 1 to 9 - 12

9.1 Utility Execution 9 - 1
9.2 Utility Function List 9 - 2
9.3 Utility Display 9 - 5
9.3.1 Display operation of main menu . . . . . 9 - 7
9.3.2 Utility basic configuration . . . . . 9 - 10
9.3.3 Basic operation of settings change . . . . . 9 - 11

10. COMMUNICATION INTERFACE SETTING (COMMUNICATION SETTING) 10 - 1 to 10 - 16

10.1 Communication Setting 10 - 1
10.1.1 Communication setting functions . . . . . 10 - 1
10.1.2 Communication setting display operation . . . . . 10 - 1
10.1.3 Communication setting contents . . . . . 10 - 2
10.1.4 Communication setting display operation . . . . . 10 - 6
10.2 Communication Detail Settings 10 - 11
10.2.1 Communication detail settings functions . . . . . 10 - 11
10.2.2 Communication detail settings display operation . . . . . 10 - 11
10.2.3 Display contents of communication detail settings . . . . . 10 - 13

11. DISPLAY AND OPERATION SETTINGS (GOT SET UP) 11 - 1 to 11 - 46

11.1 Display Settings 11 - 2
11.1.1 Display setting functions . . . . . 11 - 2
11.1.2 Display operation of display setting . . . . . 11 - 5
11.1.3 Display setting operations . . . . . 11 - 6
11.2 Brightness, Contrast Adjustment 11 - 12
11.2.1 Functions of the brightness, contrast . . . . . 11 - 12

11.2.2 Display operation of brightness, contrast . . . . . 11 - 12
11.2.3 Operating the brightness, contrast . . . . . 11 - 13
11.3 Operation settings 11 - 14
11.3.1 Operation setting functions . . . . . 11 - 14
11.3.2 Display operation of display setting . . . . . 11 - 15
11.3.3 Setting operation of operation . . . . . 11 - 16
11.4 Security Level Change 11 - 18
11.4.1 Security level change functions . . . . . 11 - 18
11.4.2 Displaying the security level change . . . . . 11 - 18
11.4.3 Security level change operation . . . . . 11 - 19
11.5 Utility Call Key Setting 11 - 20
11.5.1 Utility call key setting function . . . . . 11 - 20
11.5.2 Utility call key display operation . . . . . 11 - 20
11.5.3 Utility call key setting operation . . . . . 11 - 21
11.6 Adjusting the Touch Panel Position (Touch panel calibration Setting) 11 - 23
11.6.1 Touch panel calibration setting function . . . . . 11 - 23
11.6.2 Touch panel calibration setting display operation . . . . . 11 - 23
11.6.3 Touch panel calibration operation . . . . . 11 - 24
11.7 Q/QnA Ladder Monitor 11 - 26
11.7.1 Q/QnA ladder monitor setting function . . . . . 11 - 26
11.7.2 Display operation of Q/QnA ladder monitor . . . . . 11 - 27
11.7.3 Q/QnA ladder monitor setting operation . . . . . 11 - 28
11.8 Transparent Settings (Transparent Mode Setting) 11 - 29
11.8.1 Function of the transparent mode . . . . . 11 - 29
11.8.2 Displaying the transparent mode . . . . . 11 - 29
11.8.3 Operation the transparent mode . . . . . 11 - 30
11.9 Video Unit Settings 11 - 31
11.9.1 Functions of the video unit settings . . . . . 11 - 31
11.9.2 Displaying the video unit settings . . . . . 11 - 32
11.9.3 Operating the video unit settings . . . . . 11 - 33
11.10 Video Display Settings 11 - 34
11.10.1 Functions of the video display settings . . . . . 11 - 34
11.10.2 Displaying the video display settings . . . . . 11 - 35
11.10.3 Operating the video display settings . . . . . 11 - 36
11.11 RGB Display Settings 11 - 38
11.11.1 Functions of the RGB display settings . . . . . 11 - 38
11.11.2 Displaying the RGB display settings . . . . . 11 - 38
11.11.3 Operating the RGB display settings . . . . . 11 - 39
11.12 Backup/Restore Settings 11 - 40
11.12.1 Backup/restore function . . . . . 11 - 40
11.12.2 Display operation of backup/restoration setting . . . . . 11 - 41
11.12.3 Backup/restoration setting operation . . . . . 11 - 42
11.13 Trigger Backup Settings 11 - 44
11.13.1 Trigger backup settings . . . . . 11 - 44
11.13.2 Display operation of trigger backup setting . . . . . 11 - 44
11.13.3 Trigger backup setting operation . . . . . 11 - 45

12. CLOCK SETTINGS AND BATTERY STATUS DISPLAY (TIME SETTING AND DISPLAY) 12 - 1 to 12 - 6

12.1 Time Setting and Display 12 - 1
12.1.1 Time setting and display functions . . . 12 - 1
12.1.2 Display operation of clock display and setting . . . 12 - 2
12.1.3 Operating the time setting & display . . . 12 - 3

13. FILE DISPLAY AND COPY (PROGRAM/DATA CONTROL) 13 - 1 to 13 - 113

13.1 Data Storage Location 13 - 1
13.1.1 Drive name allocation . . . 13 - 1
13.1.2 Data type and the storage location . . . 13 - 2
13.1.3 OS version confirmation . . . 13 - 4
13.1.4 Capacity confirmation of the project data downloading location . . . 13 - 6
13.1.5 Display file . . . 13 - 7
13.2 OS Information 13 - 8
13.2.1 Function of OS information . . . 13 - 8
13.2.2 Display operation of OS information . . . 13 - 9
13.2.3 Display example of OS information . . . 13 - 10
13.2.4 Operation of OS information . . . 13 - 11
13.3 Project Information 13 - 16
13.3.1 Functions of the project information . . . 13 - 16
13.3.2 Display operation of project information . . . 13 - 17
13.3.3 Display example of project information . . . 13 - 18
13.3.4 Operation of project information . . . 13 - 19
13.4 Alarm Information 13 - 28
13.4.1 Function of alarm information . . . 13 - 28
13.4.2 The display operation of alarm information . . . 13 - 28
13.4.3 The display example of alarm information . . . 13 - 29
13.4.4 Alarm information operation . . . 13 - 30
13.5 Hard Copy Information 13 - 36
13.5.1 The function of hardcopy information . . . 13 - 36
13.5.2 The display operation of hardcopy information . . . 13 - 36
13.5.3 Display exmaple of hardcopy information . . . 13 - 37
13.5.4 The operation of hardcopy information . . . 13 - 38
13.6 Memory Card Format 13 - 42
13.6.1 Function of the memory card format . . . 13 - 42
13.6.2 Display operation of memory card format . . . 13 - 42
13.6.3 Operating the memory card format . . . 13 - 43
13.7 Advanced Recipe Information 13 - 45
13.7.1 Function of advanced recipe information . . . 13 - 45
13.7.2 Operation of advanced recipe information display . . . 13 - 46
13.7.3 Example of advanced recipe information display . . . 13 - 47
13.7.4 Advanced recipe information operation . . . 13 - 49
13.7.5 Precautions . . . 13 - 66

13.8 Logging Information 13 - 68
13.8.1 Function of logging information . . . 13 - 68
13.8.2 Display operation of logging information . . . 13 - 69
13.8.3 Example of logging information display . . . 13 - 70
13.8.4 Logging information operation . . . 13 - 71
13.8.5 Precautions . . . 13 - 80
13.9 Memory Information 13 - 82
13.9.1 Memory information functions . . . 13 - 82
13.9.2 Memory information display operation . . . 13 - 82
13.9.3 Memory information display example . . . 13 - 83
13.10 Special Data Information 13 - 84
13.10.1 Special data information function . . . 13 - 84
13.10.2 Special data information display operation . . . 13 - 85
13.10.3 Special data information display example . . . 13 - 86
13.10.4 Special data information operation . . . 13 - 87
13.11 Operation Log Information 13 - 93
13.11.1 Function of operation log information . . . 13 - 93
13.11.2 Display operation of operation log information . . . 13 - 94
13.11.3 Example of operation log information display . . . 13 - 95
13.11.4 Operation log information operation . . . 13 - 96
13.11.5 Precautions . . . 13 - 108
13.12 GOT Data Package Acquisition 13 - 110
13.12.1 GOT data package acquisition function . . . 13 - 110
13.12.2 Display operation of GOT data package acquisition . . . 13 - 110
13.12.3 Display example of GOT data package acquisition . . . 13 - 111
13.12.4 GOT data package acquisition operation . . . 13 - 112

14. GOT SELF CHECK (DEBUG & SELF CHECK) 14 - 1 to 14 - 53

14.1 Debug 14 - 1
14.1.1 The Debug function . . . 14 - 1
14.1.2 Display operation of Debug . . . 14 - 2
14.2 Self check 14 - 3
14.2.1 Self check function . . . 14 - 3
14.3 Memory Check 14 - 4
14.3.1 Memory check function . . . 14 - 4
14.3.2 Display operation of memory check . . . 14 - 4
14.4 Drawing Check 14 - 7
14.4.1 Drawing check function . . . 14 - 7
14.4.2 Display operation of drawing check . . . 14 - 7
14.4.3 Drawing check operation . . . 14 - 8
14.5 Font Check 14 - 12
14.5.1 Font check function . . . 14 - 12
14.5.2 Display operation of Font check . . . 14 - 12
14.5.3 Font check operation . . . 14 - 13
14.6 Touch Panel Check 14 - 14
14.6.1 Touch panel check function . . . 14 - 14
14.6.2 Display operation of Touch panel check . . . 14 - 14

14.6.3 Touch panel check operations . . . . . 14 - 15
14.7 I/O Check 14 - 16
14.7.1 I/O check function . . . . . 14 - 16
14.7.2 Display operation of I/O Check . . . . . 14 - 17
14.7.3 I/O Check Operation . . . . . 14 - 18
14.8 NETWK Unit Status Display 14 - 21
14.8.1 Functions of the NETWK unit status display . . . . . 14 - 21
14.8.2 Displaying the NETWK unit status display . . . . . 14 - 21
14.8.3 Display example of the NETWK unit status display . . . . . 14 - 22
14.9 System Alarm Display 14 - 32
14.9.1 System alarm display function . . . . . 14 - 32
14.9.2 Displaying the system alarm display . . . . . 14 - 32
14.9.3 Operating the system alarm display . . . . . 14 - 33
14.10 GOT Start Time 14 - 34
14.10.1 GOT start time function . . . . . 14 - 34
14.10.2 Display operation of GOT start time . . . . . 14 - 34
14.10.3 Display of GOT start time . . . . . 14 - 35
14.11 Operator Information Management 14 - 36
14.11.1 Operator management . . . . . 14 - 36
14.11.2 Password change . . . . . 14 - 48
14.11.3 Function setting . . . . . 14 - 51

15. CLEANING OF DISPLAY SECTION (CLEAN) 15 - 1 to 15 - 2

15.1 Clean 15 - 1
15.1.1 Display operation of Clean . . . . . 15 - 1
15.1.2 Operation of Clean . . . . . 15 - 2

16. MAINTENANCE TIME NOTIFICATION SETTING (MAINTENANCE TIMING SETTING) 16 - 1 to 16 - 4

16.1 Maintenance Timing Setting 16 - 2
16.1.1 Function of the maintenance timing setting . . . . . 16 - 2
16.1.2 Display operation of maintenance timimg setting . . . . . 16 - 3
16.1.3 Operating the maintenance timing setting . . . . . 16 - 4

17. ADDITION TIMES RESET FOR MAINTENANCE TIME NOTIFICATION (ADDITION TIMES RESET) 17 - 1 to 17 - 2

17.1 Addition times reset 17 - 1
17.1.1 Addition times reset function . . . . . 17 - 1
17.1.2 Display operation of Addition times reset . . . . . 17 - 1
17.1.3 Operation of Addition times reset . . . . . 17 - 2

18. INSTALLATION OF COREOS, BOOTOS AND STANDARD MONITOR OS 18 - 1 to 18 - 14

18.1 BootOS and Standard Monitor OS Required for installation 18 - 2
18.2 Prior Preparations for Installing BootOS and Standard Monitor OS 18 - 3

18.3 BootOS and Standard Monitor OS Installation Using Memory Card 18 - 4
18.3.1 Installing when starting the GOT . . . 18 - 5
18.3.2 Installation method using the program/data control function (Utility) . . . 18 - 6
18.4 When installing the different version of BootOS, standard monitor OS 18 - 8
18.5 CoreOS 18 - 11
18.5.1 Installing the CoreOS. . . . 18 - 11
18.5.2 When the CoreOS cannot be installed . . . 18 - 14

19. MAINTENANCE AND INSPECTION 19 - 1 to 19 - 18

19.1 Daily Inspection 19 - 2
19.2 Periodic Inspection 19 - 2
19.3 Cleaning Method 19 - 3
19.4 Battery Voltage Low Detection and Battery Replacement 19 - 4
19.5 Backlight Shutoff Detection and Replacement 19 - 5
19.6 Backlight Replacement 19 - 6
19.6.1 Applicable backlight . . . 19 - 6
19.6.2 Replacement procedure of backlight . . . 19 - 6

20. TROUBLESHOOTING 20 - 1 to 20 - 32

20.1 GOT Restoration Sheet 20 - 1
20.2 Troubleshooting in Bus Connection 20 - 14
20.2.1 Locating error positions . . . 20 - 14
20.2.2 Further locating error positions . . . 20 - 15
20.2.3 Specific example of troubleshooting . . . 20 - 16
20.3 ERROR MESSAGE AND SYSTEM ALARM 20 - 17
20.3.1 Error Contents Display. . . . 20 - 17
20.3.2 List of Error Message/System Alarm . . . 20 - 19

APPENDICES App- 1 to App - 46

Appendix 1 External Dimensions App- 1
Appendix 2 Confirming of Versions and Conformed Standards App- 15
Appendix 3 Usage Condition of Utility Function App- 16
Appendix 4 Transportation Precautions App- 20
Appendix 4.1 Relevant models. . . . App- 20
Appendix 4.2 Transportation guidelines . . . App- 20
Appendix 5 How to Choose Drive App- 21
Appendix 6 List of Functions Added by GT Designer2 Version Upgrade (For GOT1000 Series) App- 22
Appendix 6.1 GT15, GT SoftGOT1000, and GT11 . . . App- 22
Appendix 6.2 For GT10 . . . App- 44

INDEX Index- 1 to Index- 3

ABOUT MANUALS

The following manuals are also related to this product.
In necessary, order them by quoting the details in the tables below.

Related Manuals

Manual Name	Manual Number (Model Code)
GT SoftGOT1000 Version2 Operating Manual Describes the screen configuration, functions and using method of GT SoftGOT1000. (Sold separately)	SH-080602ENG (1D7M48)
GT Designer2 Version2 Basic Operation/Data Transfer Manual (For GOT1000 Series) Describes methods of the GT Designer2 installation operation, basic operation for drawing and transmitting data to GOT1000 series. (Sold separately) *1	SH-080529ENG (1D7M24)
GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) 1/3 GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) 2/3 GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) 3/3 Describes specifications and settings of the object functions used in GOT1000 series. (Sold separately) *1	SH-080530ENG (1D7M25)
GOT1000 Series Connection Manual (1/3) GOT1000 Series Connection Manual (2/3) GOT1000 Series Connection Manual (3/3) Describes system configurations of the connection method applicable to GOT1000 series and cable creation method. (Sold separately) *1	SH-080532ENG (1D7M26)
GOT1000 Series Extended/Option Functions Manual Describes extended functions and option functions applicable to GOT series. (Sold separately) *1	SH-080544ENG (1D7M32)
GOT1000 Series Gateway Functions Manual Describes specifications, system configurations and setting method of the gateway function. (Sold separately) *1	SH-080545ENG (1D7M33)
GOT1000 Series MES Interface Function Manual Describes the specifications, system configurations, and setting method of the MES interface function. (Sold separately) *1	SH-080654ENG (1D7M63)

*1 The manual in PDF-format is included in the GT Works2 and GT Designer2 products.

ABBREVIATIONS AND GENERIC TERMS

Abbreviations and generic terms used in this manual are as follows:

■ GOT

Abbreviations and generic terms			Description
GOT1000 Series	GT SoftGOT1000		Abbreviation of GT SoftGOT1000
	GT1595	GT1595-X	Abbreviation of GT1595-XTBA, GT1595-XTBD
	GT1585	GT1585V-S	Abbreviation of GT1585V-STBA
		GT1585-S	Abbreviation of GT1585-STBA, GT1585-STBD
	GT157□	GT1575V-S	Abbreviation of GT1575V-STBA
		GT1575-S	Abbreviation of GT1575-STBA, GT1575-STBD
		GT1575-V	Abbreviation of GT1575-VTBA, GT1575-VTBD
		GT1575-VN	Abbreviation of GT1575-VNBA, GT1575-VNBD
		GT1572-VN	Abbreviation of GT1572-VNBA, GT1572-VNBD
	GT156□	GT1565-V	Abbreviation of GT1565-VTBA, GT1565-VTBD
		GT1562-VN	Abbreviation of GT1562-VNBA, GT1562-VNBD
	GT155□	GT1555-V	Abbreviation of GT1555-VTBD
		GT1555-Q	Abbreviation of GT1555-QTBD, GT1555-QSBD
		GT1550-Q	Abbreviation of GT1550-QLBD
	GT15□□, GT15		Abbreviation of GT1595, GT1585, GT157□, GT156□, GT155□
	GT115□	GT1155-Q	Abbreviation of GT1155-QTBDQ, GT1155-QSBDQ, GT1155-QTBDA, GT1155-QSBDA, GT1155-QTBD, GT1155-QSBD
		GT1150-Q	Abbreviation of GT1150-QLBDQ, GT1150-QLBDA, GT1150-QLBD
	Handy GOT	GT1155HS-Q	Abbreviation of GT1155HS-QSBD
		GT1150HS-Q	Abbreviation of GT1150HS-QLBD
	GT11□□, GT11		Abbreviation of GT1155-Q, GT1150-Q, GT11 Handy GOT
	GT1030		Abbreviation of GT1030-LBD, GT1030-LBD2, GT1030-LBDW, GT1030-LBDW2
	GT1020		Abbreviation of GT1020-LBD, GT1020-LBD2, GT1020-LBL, GT1020-LBDW, GT1020-LBDW2, GT1020-LBLW
	GT10□□, GT10		Abbreviation of GT1030, GT1020
GOT900 Series			Abbreviation of GOT-A900 series, GOT-F900 series
GOT800 Series			Abbreviation of GOT-800 series

■ Communication unit

Abbreviations and generic terms	Description
Bus connection unit	GT15-QBUS, GT15-QBUS2, GT15-ABUS, GT15-ABUS2, GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L
Serial communication unit	GT15-RS2-9P, GT15-RS4-9S, GT15-RS4-TE
RS-422 conversion unit	GT15-RS2T4-9P, GT15-RS2T4-25P
Ethernet communication unit	GT15-J71E71-100
MELSECNET/H communication unit	GT15-J71LP23-25, GT15-J71BR13
MELSECNET/10 communication unit	GT15-75J71LP23-Z*1, GT15-75J71BR13-Z*2
CC-Link IE controller network communication unit	GT15-J71GP23-SX
CC-Link communication unit	GT15-J61BT13, GT15-75J61BT13-Z*3
Interface converter unit	GT15-75IF900

*1 A9GT-QJ71LP23 + GT15-75IF900 set

*2 A9GT-QJ71BR13 + GT15-75IF900 set

*3 A8GT-J61BT13 + GT15-75IF900 set

■ Option unit

Abbreviations and generic terms		Description
Printer unit		GT15-PRN
Video/RGB unit	Video input unit	GT15V-75V4
	RGB input unit	GT15V-75R1
	Video/RGB input unit	GT15V-75V4R1
	RGB output unit	GT15V-75ROUT
CF card unit		GT15-CFCD
CF card extension unit*1		GT15-CFEX-C08SET
External I/O unit		GT15-DIO
Sound output unit		GT15-SOUT

*1 GT15-CFEX + GT15-CFEXIF + GT15-C08CF set.

■ Option

Abbreviations and generic terms		Description
Memory card	CF card	GT05-MEM-16MC, GT05-MEM-32MC, GT05-MEM-64MC, GT05-MEM-128MC, GT05-MEM-256MC
Memory card adaptor		GT05-MEM-ADPC
Option function board		GT15-FNB, GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M, GT11-50FNB
Battery		GT15-BAT, GT11-50BAT
Protective Sheet		GT15-90PSCB, GT15-90PSGB, GT15-90PSCW, GT15-90PSGW, GT15-80PSCB, GT15-80PSGB, GT15-80PSCW, GT15-80PSGW, GT15-70PSCB, GT15-70PSGB, GT15-70PSCW, GT15-70PSGW, GT15-60PSCB, GT15-60PSGB, GT15-60PSCW, GT15-60PSGW, GT15-50PSCB, GT15-50PSGB, GT15-50PSCW, GT15-50PSGW, GT11-50PSCB, GT11-50PSGB, GT11-50PSCW, GT11-50PSGW, GT11H-50PSC, GT10-30PSCB, GT10-30PSGB, GT10-30PSCW, GT10-30PSGW, GT10-20PSCB, GT10-20PSGB, GT10-20PSCW, GT10-20PSGW
Protective cover for oil		GT05-90PCO, GT05-80PCO, GT05-70PCO, GT05-60PCO, GT05-50PCO
USB environmental protection cover		GT15-UCOV, GT11-50UCOV
Stand		GT15-90STAND, GT15-80STAND, GT15-70STAND, A9GT-50STAND, GT05-50STAND
Attachment		GT15-70ATT-98, GT15-70ATT-87, GT15-60ATT-97, GT15-60ATT-96, GT15-60ATT-87, GT15-60ATT-77, GT15-50ATT-95W, GT15-50ATT-85
Backlight		GT15-90XLTT, GT15-80SLTT, GT15-70SLTT, GT15-70VLTT, GT15-70VLTN, GT15-60VLTT, GT15-60VLTN
Multi-color display board		GT15-XHNB, GT15-VHNB
Connector conversion box		GT11H-CNB-37S
Emergency stop sw guard cover		GT11H-50ESCOV
Memory loader		GT10-LDR

■ Software

Abbreviations and generic terms	Description
GT Works2 Version□	SW□D5C-GTWK2-E, SW□D5C-GTWK2-EV
GT Designer2 Version□	SW□D5C-GTD2-E, SW□D5C-GTD2-EV
GT Designer2	Abbreviation of screen drawing software GT Designer2 for GOT1000/GOT900 series
GT Converter2	Abbreviation of data conversion software GT Converter2 for GOT1000/GOT900 series
GT Simulator2	Abbreviation of screen simulator GT Simulator 2 for GOT1000 / GOT900 series
GT SoftGOT1000	Abbreviation of monitoring software GT SoftGOT1000
GT SoftGOT2	Abbreviation of monitoring software GT SoftGOT2
GX Developer	Abbreviation of SW□D5C-GPPW-E(-EV)/SW□D5F-GPPW-E type software package
GX Simulator	Abbreviation of SW□D5C-LLT-E(-EV) type ladder logic test tool function software packages (SW5D5C-LLT (-EV) or later versions)
Document Converter	Abbreviation of document data conversion software Document Converter for GOT1000 series
PX Developer	Abbreviation of SW□D5C-FBDQ-E type FBD software package for process control

■ License key (for GT SoftGOT1000)

Abbreviations and generic terms	Description
License	GT15-SGTKEY-U, GT15-SGTKEY-P

■ License key (for GT SoftGOT2)

Abbreviations and generic terms	Description
License key	A9GTSOFT-LKEY-P (For DOS/V PC)
License key FD	SW5D5F-SGLKEY-J (For PC CPU module)

■ Others

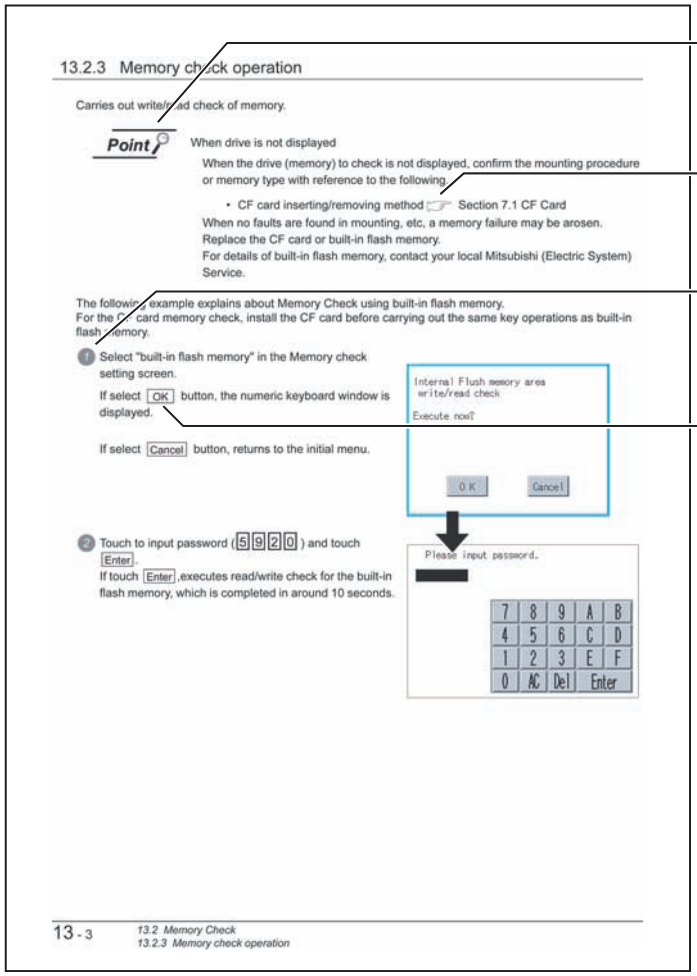
Abbreviations and generic terms		Description
Omron PLC		Abbreviation of PLC manufactured by OMRON Corporation
KEYENCE PLC		Abbreviation of PLC manufactured by KEYENCE
Sharp PLC		Abbreviation of PLC manufactured by SHARP Corporation
JTEKT PLC		Abbreviation of PLC manufactured by JTEKT Corporation
Toshiba PLC		Abbreviation of PLC manufactured by TOSHIBA CORPORATION
TOSHIBA MACHINE PLC		Abbreviation of PLC manufactured by TOSHIBA MACHINE CO., LTD.
HITACHI IES PLC		Abbreviation of PLC manufactured by Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI PLC		Abbreviation of PLC manufactured by Hitachi, Ltd.
FUJI FA PLC		Abbreviation of PLC manufactured by Fuji Electric FA Components & Systems Co., Ltd.
Matsushita PLC		Abbreviation of PLC manufactured by Matsushita Electric Works, Ltd
Yaskawa PLC		Abbreviation of PLC manufactured by YASKAWA Electric Corporation
Yokogawa PLC		Abbreviation of PLC manufactured by Yokogawa Electric Corporation
ALLEN-BRADLEY PLC		Abbreviation of Allen-Bradley PLC manufactured by Rockwell Automation, Inc.
SCHNEIDER PLC		Abbreviation of PLC manufactured by Schneider Electric SA
SIEMENS PLC		Abbreviation of PLC manufactured by Siemens AG
Temperature controller	OMRON temperature controller	Abbreviation of temperature controller manufactured by OMRON
	SHINKO indicating controller	Abbreviation of temperature controller manufactured by Shinko Technos Co., Ltd.
	CHINO controller	Abbreviation of temperature controller manufactured by CHINO CORPORATION
	FUJI SYS temperature controller	Abbreviation of temperature controller manufactured by Fuji Electric Systems Co., Ltd.
	YAMATAKE temperature controller	Abbreviation of temperature controller manufactured by YAMATAKE
	YOKOGAWA temperature controller	Abbreviation of temperature controller manufactured by Yokogawa Electric Corporation
	RKC temperature controller	Abbreviation of temperature controller manufactured by RKC
PC CPU module		Abbreviation of PC CPU Unit manufactured by CONTEC CO., LTD
GOT (server)		Abbreviation of GOTs that use the server function
GOT (client)		Abbreviation of GOTs that use the client function
Windows® font		Abbreviation of TrueType font and OpenType font available for Windows® (Differs from the True Type fonts settable with GT Designer2)
Intelligent function module		Indicates the modules other than the PLC CPU, power supply module and I/O module that are mounted to the base unit.
MODBUS® /TCP		Generic term for the protocol designed to use MODBUS® protocol messages on a TCP/IP network.

1 Functions

This manual describes functions available for the GT Designer2 Version2.77F.
For the added functions by the product version upgrade, refer to the list of functions added by GT Desiger2 version upgrade in Appendices.

2 Symbols

Following symbols are used in this manual.



Point — Refers to the information required.

Remark — Refers to the supplementary explanations for reference.

Indicates the items in which the detailed explanation is described (manual, chapter, section, item of the manual).

1 → 2 → 3 · · · ·
Indicates the operation steps.

Menu and items are differentiated with parentheses.

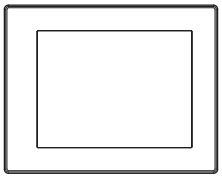
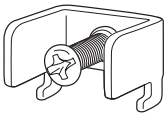
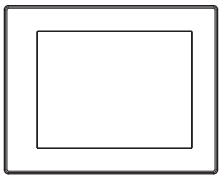
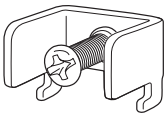
[ ] : refers to the menu of GOT utility.

[ ] : refers to the button in the dialog box of GOT utility.

* The above is different from the actual page, as it is provided for explanation only.

PACKING LIST

After unpacking, confirm that the following parts are included.

Model	Product	Quantity
GT1595-X	GOT 	1
	Installation fitting 	8
	GT15 General Description	1
GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V, GT1555-Q, GT1550-Q	GOT 	1
	Installation fitting 	4
	GT15 General Description	1

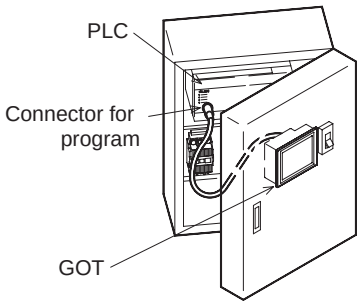
The following products are included a spare for the plastic fixing screw of the GOT.

- GT1585-S: Hardware Version B or earlier (Apr.,2005)
- GT1575-S: Hardware Version B or earlier (Apr.,2005)
- GT1575-V: Hardware Version D or earlier (Apr.,2005)
- GT1565-V: Hardware Version D or earlier (Apr.,2005)

1. OVERVIEW

1 About GOT

GOT is installed on the panel surface of control panel or operating panel and connects to the PLC in the control panel. GOT carries out switch operation, lamp display, data display, and message display etc.



For display screen, two kinds of display screens, user-created screen and utility screen are available.

(1) User-created Screen

User screen is a screen drawn by GT Designer2.
The objects of "Touch switch", "Lamp display", "Comment display", and "Numeric display" can be laid out arbitrarily to be displayed.
Moreover, the multiple screens created by GT Designer2 can be overlapped and switched to be displayed.

For details, refer to the following.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
GT Designer2 Version□ Screen Design Manual

(2) Utility Screen

Utility screen is a screen prepared beforehand for GOT.
Installing BootOS or standard OS in the GOT from GT Designer2 enables utility screen displaying.
The utility screen has menus as [Brightness/contrast adjustment screen] and [GOT memory check screen] etc.

For details, refer to the following.

☞ Chapter 9 to Chapter 17

2 About Manual

The following manuals related to GOT1000 series are available. Refer to each manual in accordance with the intended use.

(1) Installation of the software programs → Drawing → Data transfer
For operations from creating project data to transferring data to GOT, refer to the following manuals.

Purpose	 GT Designer2 Version ☐ Basic Operation/Data Transfer Manual*1	 GT Designer2 Version ☐ Screen Design Manual*1
Installing product on PC	Detailed	
Creating projects	Detailed	
Creating screens	Detailed	
Drawing figures	Detailed	
Making Common Settings	Overview	Detailed
Placing/Setting objects	Overview	Detailed
Transferring data to GOT	Detailed	

*1 Stored in the GT Works2/GT Designer2 in PDF format.

(2) Installing a GOT → Connecting to a controller

For the operations from installing a GOT to communicating with a controller, refer to the following manuals.

Purpose	 (Included) GT15 General Description GT11 General Description	 GT15 User's Manual GT11 User's Manual	 GOT1000 Series Connection Manual*1
Confirming part names and specifications of the GOT	Overview	Detailed	
Confirming the GOT installation method	Overview	Detailed	
Confirming the mounting method for extension units or option devices		Detailed	Overview
Confirming the PLC connection method			Detailed
Confirming the utility operation method		Detailed	
Confirming error codes (system alarm) displayed on the GOT		Detailed	

*1 Stored in the GT Works2/GT Designer2 in PDF format.

(3) Other manuals

The following manuals are also available.

The following manuals are stored in the GT Works2/GT Designer2 in PDF format.

(a) GOT1000 Series Extended/Option Functions Manual
Describes functions for more efficient debugging as the ladder monitor function, system monitor function and A list edit function.

(b) GOT1000 Series Gateway Functions Manual
Describes how to use the gateway function.

(c) GT SoftGOT1000 Version □ Operating Manual
Describes how to use the GT SoftGOT1000 and various functions.

(d) GT Simulator2 Version □ Operating Manual
Describes how to simulate the created project data with the GT Simulator2.

(e) GT Converter2 Version □ Operating Manual
Describes how to use the GT Converter2.

(f) GOT1000 Series MES Interface Function Manual
Describes how to use the GT MES Interface Function.

1.1 Features

(1) Improved monitoring performance and connectivity to FA devices
- Using of TFT color liquid crystal display (high intensity, wide angle view and high definition type) provides clear full-color display and displays small characters clearly. (Displays digital images of BMP and other formats in 65536 colors.)*1
- Provides multi-language display function based on Unicode2.1 True Type font and high-speed drawing of beautiful text.
- High speed monitoring through high speed communication at maximum of 115.2kbps.
- High speed display and high speed touch switch response.

(2) More efficient GOT operations including screen design, startup, adjustment, management and maintenance works
- 9MB user memory is included as standard. (Memory capacity can be expanded up to 57MB by increasing the option memory)*1
- CF card interface is included as standard.
- Font installation is available to increase the system fonts.
- Combined use of 4 types of alarms (system alarm, user alarm, alarm history, alarm popup display) realizes more efficient alarm notification.
- Maintenance timing report function is available that measures the backlight energization time and notifies of maintenance time.
- The USB connector is positioned on the GOT front. This enables the system startup to be performed more efficiently using FA device startup tool, and eliminates the necessity of indirect works (opening and closing the control panel, cable replacement, cable rewiring) in order to improve the working efficiency.
- The blown backlight bulb can be confirmed even during screen saving, with the blinked POWER LED at backlight shutoff detection.

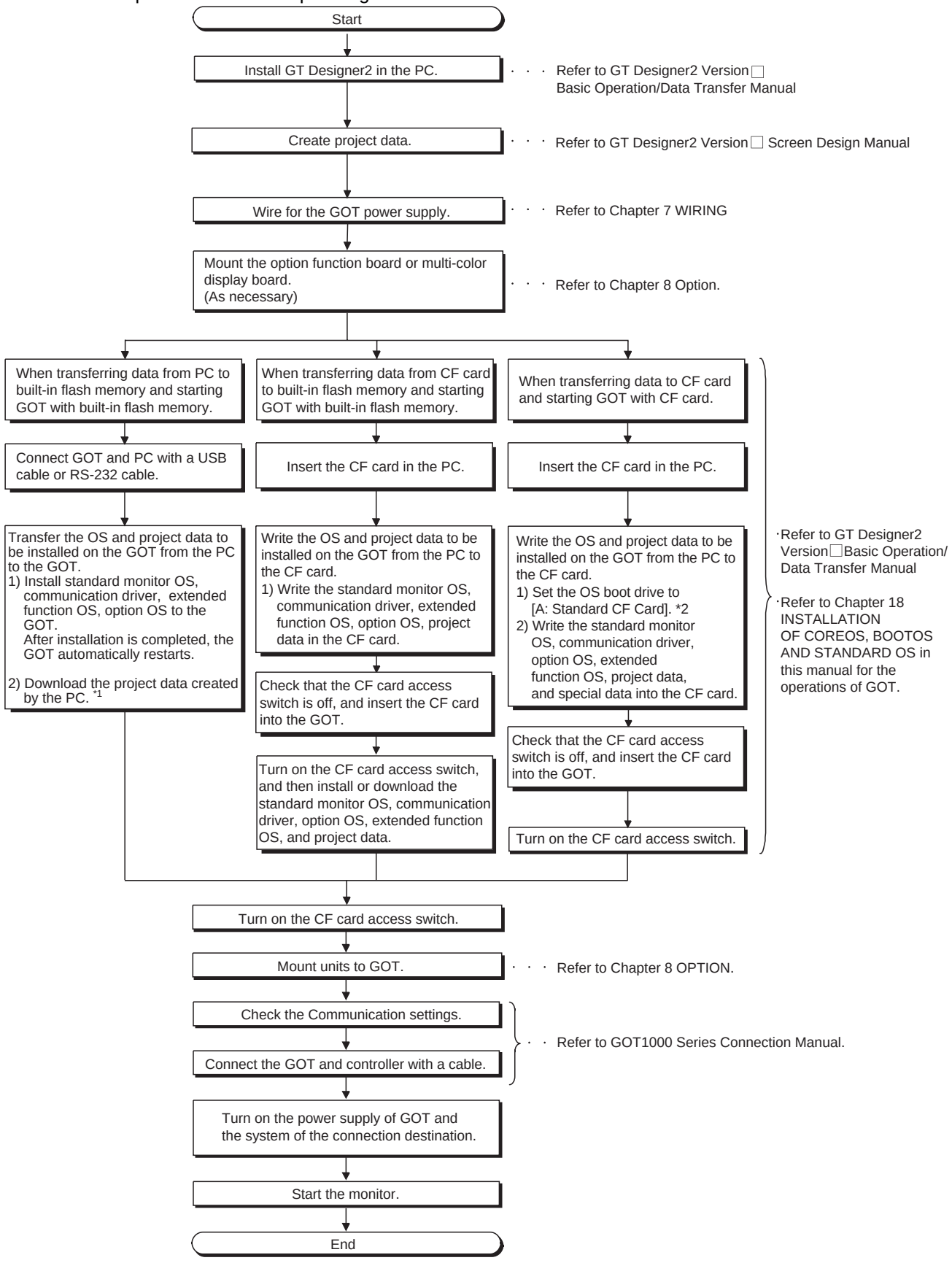
(3) Enhanced support of FA device setup tools
- Transferring and monitoring sequence programs with the personal computer connected to the GOT can be executed when connecting to a PLC CPU with the direct CPU connection or bus connection. (FA transparent function)

*1 The specifications differ depending on the GOT to be used.
For the specifications, refer to the following.

☞ 3.2 Performance Specifications

1.2 Rough Pre-operation Procedure

The outline procedure before operating GOT is shown.



* 1 Project data can be also downloaded/uploaded via Ethernet.
For download/upload of project data via Ethernet, BootOS and standard monitor OS should be installed in the GOT in advance so that the GOT and PC can communicate with each other via Ethernet by setting Communication Settings.
Refer to the following manual for details.
☞ GT Designer2 Version □ Basic Operation/Data Transfer Manual (Chapter 8 TRANSFERRING DATA)

* 2 The B drive cannot be set as the OS boot drive.

Point

Precautions for setting OS boot drive to [A: Standard CF Card]

(1) GOT startup time
When the OS boot drive is set to [A: Standard CF Card], the GOT startup time with the A drive takes longer than that with the C drive.
The GOT startup time with the A drive differs depending on the CF card type, the numbers of extended function OSs and option OSs, and project data size.

(2) Handling CF card during booting OS
Do not remove the CF card and do not turn off the CF card access switch during booting the OS.
Doing so causes the boot to fail. As a result, the GOT does not start correctly.

(3) Corrective actions when OS cannot be booted
The OS cannot be booted in the following conditions.
Take the following corrective actions, and then boot the OS again.

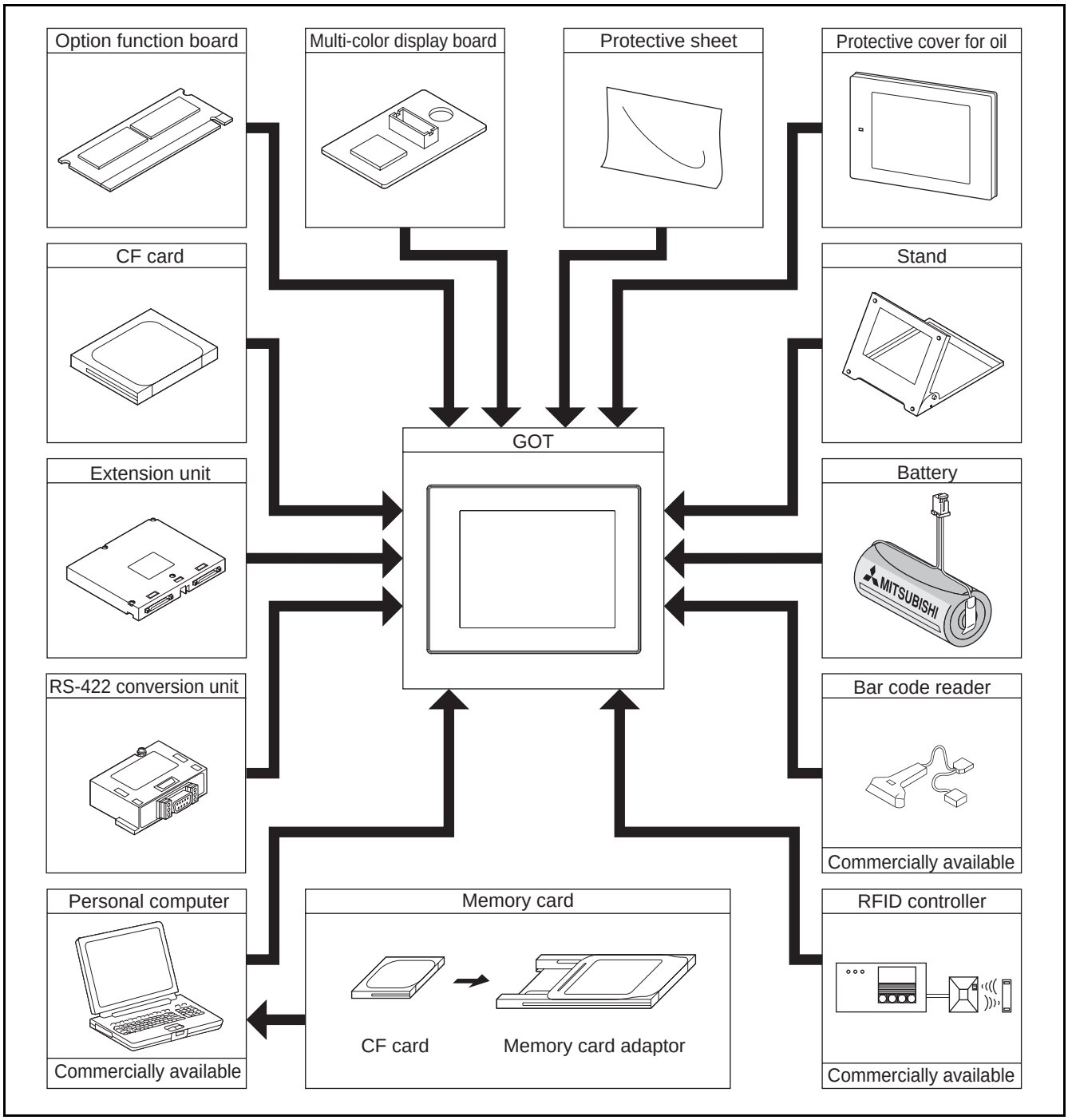
Condition	Corrective action
The type of the GOT to be used differs from the GOT type data set with GT Designer2 stored in the CF card.	Select the same GOT type as the GOT to be used in the Communicate with Memory Card screen. Select OSs and project data to be downloaded, and then download the selected data to the CF card.
The GOT has insufficient memory.	Mount an option function board with add-on memory on the GOT or delete unnecessary data. For details, refer to the following manual. ☞ GT Designer2 Version □ Basic Operation/ Data Transfer Manual
The CF card access switch is off.	Turn on the CF card access switch.

2. SYSTEM CONFIGURATION

2.1 Overall Configuration

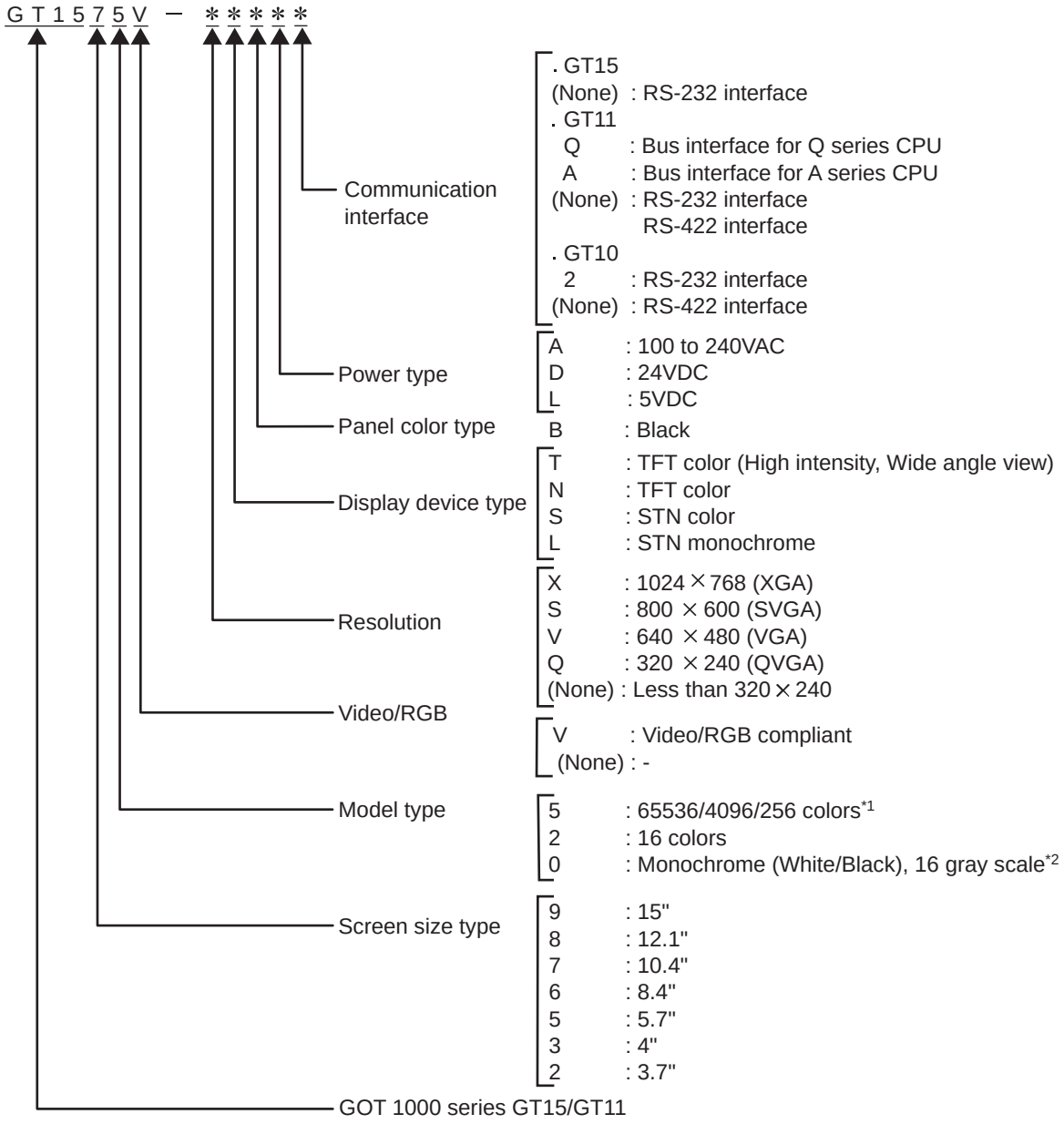
The overall configuration of GOT is as follows.
For the connection methods applicable to GOT1000 series and cable, refer to the following.

☞GOT1000 Series Connection Manual



2.2 Component List

(1) Explanation of the GOT model name

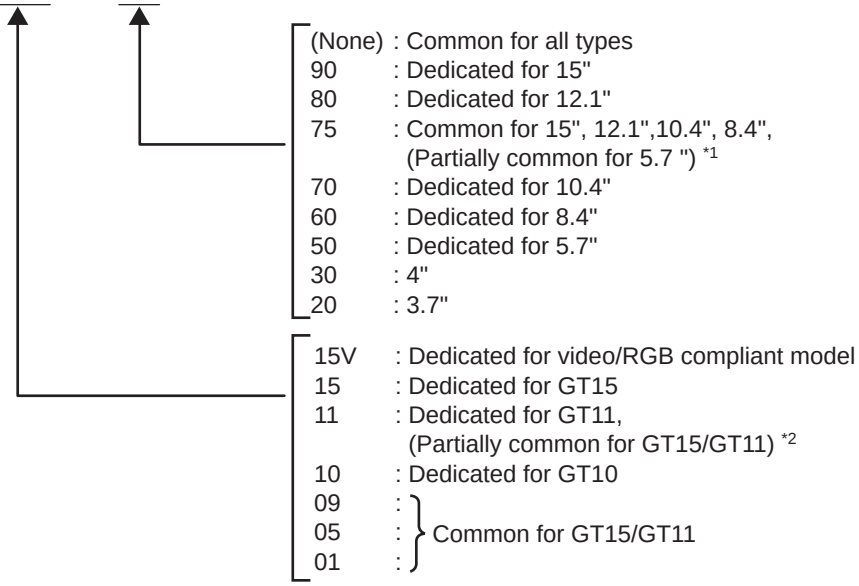


*1 For GOTs that can display 65536 colors, refer to the following.
☞ 3.2 Performance Specifications

*2 Not 16 gray scale for GT10

(2) Explanation of the option model name

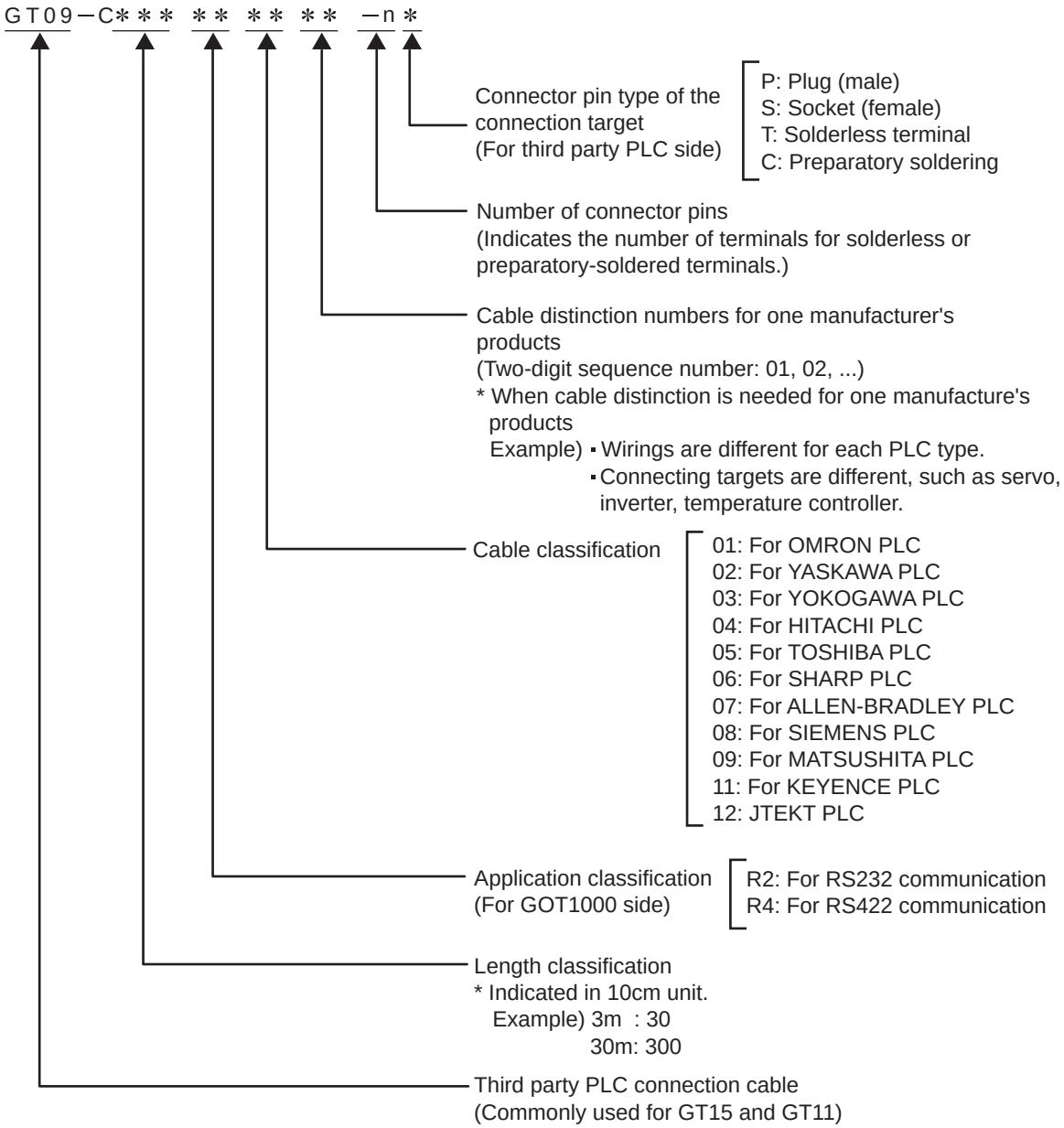
GT＊＊＊ − ＊＊ ＊＊＊＊



*1 The bus connection unit (GT15-75QBUSL, GT15-75QBU2L, GT15-75ABUSL, GT15-75ABUS2L), can also be used with GT155□.

*2 The USB environmental protection cover (GT11-50UCOV) can be used for both the GT15 and GT11.

(3) Third party PLC connection cable



2.2.1 GOT

Product name	Model name	Specifications
GOT	GT1595-XTBA	15" (1024 × 768 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 100 to 240VAC, Memory size 9MB
	GT1595-XTBD	15" (1024 × 768 dots), TFT color liquid crystal (high intensity, wide angle view), 65536 colors[*1], 24VDC, memory size 9MB
	GT1585V-STBA	12.1" (800 × 600 dots), TFT color liquid crystal (high intensity, wide angle view), 65536 colors[*1], video/RGB compliant, 100 to 240VAC, memory size 9MB
	GT1585V-STBD	12.1" (800 × 600 dots), TFT color liquid crystal display (high intensity, wide angle view), 65536 colors[*1], video/RGB compliant, 24VDC, memory size 9MB
	GT1585-STBA	12.1" (800 × 600 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 100 to 240VAC, Memory size 9MB
	GT1585-STBD	12.1" (800 × 600 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 24VDC, Memory size 9MB
	GT1575V-STBA	10.4" (800 × 600 dots), TFT color liquid crystal (high intensity, wide angle view), 65536 colors[*1], video/RGB compliant, 100 to 240VAC, memory size 9MB
	GT1575V-STBD	10.4 (800 × 600 dots), TFT color liquid crystal display (high intensity, wide angle view), 65536 colors[*1], video/RGB compliant, 24VDC, memory size 9MB
	GT1575-STBA	10.4" (800 × 600 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 100 to 240VAC, Memory size 9MB
	GT1575-STBD	10.4" (800 × 600 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 24VDC, Memory size 9MB
	GT1575-VTBA	10.4" (640 × 480 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 100 to 240VAC, Memory size 9MB
	GT1575-VTBD	10.4" (640 × 480 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 24VDC, Memory size 9MB
	GT1575-VNBA	10.4" (640 × 480 dots), TFT color liquid crystal, 256 colors, 100 to 240VAC, Memory size 5MB
	GT1575-VNBD	10.4" (640 × 480 dots), TFT color liquid crystal, 256 colors, 24VDC, Memory size 5MB
	GT1572-VNBA	10.4" (640 × 480 dots), TFT color liquid crystal, 16 colors, 100 to 240VAC, Memory size 5MB
	GT1572-VNBD	10.4" (640 × 480 dots), TFT color liquid crystal, 16 colors, 24VDC, Memory size 5MB
	GT1565-VTBA	8.4" (640 × 480 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors[*1], 100 to 240VAC, Memory size 9MB

(Continued to next page)

Product name	Model name	Specifications
GOT	GT1565-VTBD	8.4" (640 × 480 dots), TFT color liquid crystal, (high intensity, wide angle view), 65536 colors*1, 24VDC, Memory size 9MB
	GT1562-VNBA	8.4" (640 × 480 dots), TFT color liquid crystal, 16 colors, 100 to 240VAC, Memory size 5MB
	GT1562-VNBD	8.4" (640 × 480 dots), TFT color liquid crystal, 16 colors, 24VDC, Memory size 5MB
	GT1555-VTBD	5.7" (640 × 480 dots), TFT color liquid crystal (high intensity, wide angle view), 65536 colors, 24VDC, memory size 9MB
	GT1555-QTBD	5.7" (320 × 240 dots), TFT color liquid crystal (high intensity, wide angle view), 65536 colors*1, 24VDC, memory size 9MB
	GT1555-QSBD	5.7" (320 × 240 dots), STN color liquid crystal, 4096 colors, 24VDC, memory size 9MB
	GT1550-QLBD	5.7" (320 × 240 dots), STN monochrome liquid crystal, 16 (Grayscale), 24VDC, memory size 9MB

*1: For GOTs supporting 65536 colors, refer to the following.

☞ 3.2 Performance Specifications

2.2.2 Option

Communication unit (Sold separately)

Product name	Model name	Description	
Bus connection unit	GT15-QBUS	For QCPU (Q Mode)/Motion controller CPU (Q Series) connection (standard model)	For last GOT, Number of IN side connectors: 1
	GT15-QBUS2		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side
	GT15-ABUS	For A/QnACPU/Motion controller CPU (A Series) connection (standard model)	For last GOT, Number of IN side connectors: 1
	GT15-ABUS2		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side
	GT15-75QBUSL	For QCPU (Q Mode)/Motion controller CPU (Q Series) connection (slim model)	For last GOT, Number of IN side connectors: 1
	GT15-75QBUS2L		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side
	GT15-75ABUSL	For A/QnACPU/Motion controller CPU (A Series) connection (slim model)	For last GOT, Number of IN side connectors: 1
	GT15-75ABUS2L		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side
Serial communication unit	GT15-RS2	For RS-232 interface connection, connector type	
	GT15-RS4	For RS-422 interface connection, connector type	
	GT15-RS4-TE	For RS-422 interface connection, terminal block type	
Ethernet communication unit	GT15-J71E71-100	Ethernet (100Base-TX/10Base-T) unit	
MELSECNET/H communication unit	GT15-J71LP23-25	Optical double loop unit	
	GT15-J71BR13	Coaxial bus unit	
MELSECNET/10 communication unit	GT15-75J71LP23-Z	Optical loop unit (A9GT-QJ71LP23 + GT15-75IF900 set)	
	GT15-75J71BR13-Z	Coaxial bus unit (A9GT-QJ71BR13 + GT15-75IF900 set)	
CC-Link IE controller network communication unit	GT15-J71GP23-SX	Optical loop unit	
CC-Link communication unit	GT15-J61BT13	Intelligent device station unit CC-LINK Ver. 2 compliant	
	GT15-75J61BT13-Z	Intelligent device station unit (A8GT-J61BT13 + GT15-75IF900 set)	
Interface converter unit	GT15-75IF900	Conversion unit for GOT-A900/GOT800 series communication unit	

QCPU (Q Mode) bus connection cable (Sold separately)

Product name	Model name	Description	
Q extension cable GOT-to-GOT connection cable	GT15-QC06B	Cable length 0.6m	For connecting QCPU and GOT For connecting GOT and GOT
	GT15-QC12B	Cable length 1.2m	
	GT15-QC30B	Cable length 3m	
	GT15-QC50B	Cable length 5m	
	GT15-QC100B	Cable length 10m	
Q long distance connection cable GOT-to-GOT long distance connection cable	GT15-QC150BS	Cable length 15m	For long distance connection (13.2m or longer) of QCPU and GOT (A9GT-QCNB is necessary) For long distance connection of GOT and GOT
	GT15-QC200BS	Cable length 20m	
	GT15-QC250BS	Cable length 25m	
	GT15-QC300BS	Cable length 30m	
	GT15-QC350BS	Cable length 35m	

QnA/ACPU/Motion controller (A series) bus connection cable (Sold separately)

Product name	Model name	Description	
Small-size CPU extension cable GOT-to-GOT connection cable	GT15-A1SC07B	Cable length 0.7m	For connecting QnAS/AnSCPU/Motion controller CPU (A series) and GOT
	GT15-A1SC12B	Cable length 1.2m	
	GT15-A1SC30B	Cable length 3m	
	GT15-A1SC50B	Cable length 5m	For connecting QnAS/AnSCPU and GOT
	GT15-A1SC05NB	Cable length 0.45m	For connecting QnAS/AnSCPU/motion controller CPU (A series) and A7GT-CNB
	GT15-A1SC07NB	Cable length 0.7m	
	GT15-A1SC30NB	Cable length 3m	
	GT15-A1SC50NB	Cable length 5m	For connecting QnAS/AnSCPU and A7GT-CNB
Large-size CPU extension cable	GT15-C12NB	Cable length 1.2m	For connecting QnA/ACPU/Motion controller CPU (A series /Extension base) and GOT
	GT15-C30NB	Cable length 3m	
	GT15-C50NB	Cable length 5m	
	GT15-AC06B	Cable length 0.6m	For connecting QnA/ACPU/Motion controller CPU (A series /Extension base) and A7GT-CNB
	GT15-AC12B	Cable length 1.2m	
	GT15-AC30B	Cable length 3m	
	GT15-AC50B	Cable length 5m	
	GT15-A370C12B-S1	Cable length 1.2m	For connecting Motion controller CPU (A series / Extension base) and GOT
	GT15-A370C25B-S1	Cable length 2.5m	
	GT15-A370C12B	Cable length 1.2m	For connecting Motion controller CPU (A series / Extension base) and A7GT-CNB
	GT15-A370C25B	Cable length 2.5m	
Small-size CPU long distance connection cable	GT15-C100EXSS-1	Cable length 10.6m	For long distance connection of QnAS/AnSCPU/ motion controller CPU (A series) and GOT For connecting A7GT-CNB and a combined product of the GT15-EXCNB and GT15-C□BS (for long distance connection)
	GT15-C200EXSS-1	Cable length 20.6m	
	GT15-C300EXSS-1	Cable length 30.6m	

(Continued to next page)

Product name	Model name	Description	
GOT-to-GOT long distance connection cable	GT15-C07BS	Cable length 0.7m	For connecting GOT and GOT
	GT15-C12BS	Cable length 1.2m	
	GT15-C30BS	Cable length 3m	
	GT15-C50BS	Cable length 5m	
	GT15-C100BS	Cable length 10m	
	GT15-C200BS	Cable length 20m	
	GT15-C300BS	Cable length 30m	
A0J2HCPU connection cable	GT15-J2C10B	Cable length 1m	For connecting A0J2HCPU power supply module (A0J2-PW) and GOT
Buffer circuit cable	GT15-EXCNB	Cable length 0.5m	Combined with GT15-C□BS, can be used as GT15-C□EXSS-1

Connection cables for MITSUBISHI PLCs (Sold separately)

Product name		Model name	Description	
RS-232 cable	QCPU direct connection cable	GT01-C30R2-6P	Cable length 3m	For connecting QCPU and GOT
	FX communication function extension board connection cable, FX communication function adapter connection cable, data transfer cable	GT01-C30R2-9S	Cable length 3m	For connecting FXCPU communication function extension board (D-sub 9 pins connector), FXCPU communication function adapter (D-sub 9 pins connector) and GOT For connecting personal computer (Drawing software) (D-sub 9 pins: female) and GOT (D-sub 9 pins: female)
	FX communication function adaptor connection cable, data transfer cable	GT01-C30R2-25P	Cable length 3m	For connecting FXCPU communcation function adaptor (D-sub 25 pins connector) and GOT For connecting personal computer (Drawing software) (D-sub 25 pins: male) and GOT (D-sub 9 pins: female)
	Computer link connection cable	GT09-C30R2-9P	Cable length 3 m	For connecting computer link module/serial communication module and GOT
		GT09-C30R2-25P	Cable length 3 m	

(Continued to next page)

Product name		Model name	Description	
RS-422 cable	FXCPU direct connection cable, FX communication function extension board connection cable	GT01-C10R4-8P	Cable length 1m	For connecting FXCPU (MINI DIN 8 pins connector) and GOT For connecting FXCPU communication function extension board (MINI DIN 8 pins connector) and GOT
		GT01-C30R4-8P	Cable length 3m	
		GT01-C100R4-8P	Cable length 10m	
		GT01-C200R4-8P	Cable length 20m	
		GT01-C300R4-8P	Cable length 30m	
	QnA/A/FXCPU direct connection cable, computer link connection cable	GT01-C30R4-25P	Cable length 3m	For connecting QnA/ACPU/Motion controller CPU (A series)/FX (FX_1,FX_2,FX_{2C}) and GOT For connecting FA-CNV □ CBL and GOT For connecting computer link module/serial communication module and GOT
		GT01-C100R4-25P	Cable length 10m	
		GT01-C200R4-25P	Cable length 20m	
		GT01-C300R4-25P	Cable length 30m	
	Computer link connection cable	GT09-C30R4-6C	Cable length 3 m	For connecting computer link module/serial communication module and GOT
		GT09-C100R4-6C	Cable length 10 m	
		GT09-C200R4-6C	Cable length 20 m	
		GT09-C300R4-6C	Cable length 30 m	

Connection cables for OMRON PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20101-9P	Cable length 3m	For connecting GOT to OMRON PLC, serial communication module, communication board, serial communication board
	GT09-C30R20102-25S	Cable length 3m	For connecting GOT to OMRON connection cable
	GT09-C30R20103-25P	Cable length 3m	For connecting GOT to OMRON rack type host link unit

(Continued to next page)

Product name	Model name	Description	
RS-422 cable	GT09-C30R40101-9P	Cable length 3m	For connecting GOT to OMRON PLC, serial communication module, serial communication board
	GT09-C100R40101-9P	Cable length 10m	
	GT09-C200R40101-9P	Cable length 20m	
	GT09-C300R40101-9P	Cable length 30m	
	GT09-C30R40102-9P	Cable length 3m	For connecting GOT to OMRON rack type host link unit, communication board
	GT09-C100R40102-9P	Cable length 10m	
	GT09-C200R40102-9P	Cable length 20m	
	GT09-C300R40102-9P	Cable length 30m	
	GT09-C30R40103-5T	Cable length 3m	For connecting GOT to OMRON communication board (CP1W-CIF11)
	GT09-C100R40103-5T	Cable length 10m	
	GT09-C200R40103-5T	Cable length 20m	
	GT09-C300R40103-5T	Cable length 30m	

Connection cables for KEYENCE PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R21101-6P	Cable length 3m	For connecting GOT to KEYENCE PLC
	GT09-C30R21102-9S	Cable length 3m	For connecting GOT to KEYENCE multi-communication unit
	GT09-C30R21103-3T	Cable length 3m	For connecting GOT to KEYENCE multi-communication unit
RS-422 cable	GT09-C30R41101-5T	Cable length 3m	For connecting GOT to KEYENCE multi-communication unit
	GT09-C100R41101-5T	Cable length 10m	
	GT09-C200R41101-5T	Cable length 20m	
	GT09-C300R41101-5T	Cable length 30m	

Connection cables for SHARP PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20601-15P	Cable length 3m	For connecting GOT to SHARP PLC
	GT09-C30R20602-15P	Cable length 3m	For connecting GOT to SHARP PLC
RS-422 cable	GT09-C30R40601-15P	Cable length 3m	For connecting GOT to SHARP PLC
	GT09-C100R40601-15P	Cable length 10m	
	GT09-C200R40601-15P	Cable length 20m	
	GT09-C300R40601-15P	Cable length 30m	
	GT09-C30R40602-15P	Cable length 3m	For connecting GOT to SHARP PLC
	GT09-C100R40602-15P	Cable length 10m	
	GT09-C200R40602-15P	Cable length 20m	
	GT09-C300R40602-15P	Cable length 30m	
	GT09-C30R40603-6T	Cable length 3m	For connecting GOT to SHARP link unit
	GT09-C100R40603-6T	Cable length 10m	
	GT09-C200R40603-6T	Cable length 20m	
	GT09-C300R40603-6T	Cable length 30m	

Connection cables for JTEKT PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R21201-25P	Cable length 3 m	For connecting GOT to JTEKT PLC
RS-422 cable	GT09-C30R41201-6C	Cable length 3 m	For connecting GOT to JTEKT PLC
	GT09-C100R41201-6C	Cable length 10 m	
	GT09-C200R41201-6C	Cable length 20 m	
	GT09-C300R41201-6C	Cable length 30 m	

Connection cables for SHINKO indicating controller (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R21401-4T	Cable length 3m	For connecting GOT to SHINKO indicating controller (FCR-100/FCD100/FCR-23A/PC-/FIR series)

Connection cables for TOSHIBA PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20501-9P	Cable length 3m	For connecting GOT to TOSHIBA PLC
	GT09-C30R20502-15P	Cable length 3m	For connecting GOT to TOSHIBA PLC
RS-422 cable	GT09-C30R40501-15P	Cable length 3m	For connecting GOT to TOSHIBA PLC
	GT09-C100R40501-15P	Cable length 10m	
	GT09-C200R40501-15P	Cable length 20m	
	GT09-C300R40501-15P	Cable length 30m	
	GT09-C30R40502-6C	Cable length 3m	For connecting GOT to TOSHIBA PLC
	GT09-C100R40502-6C	Cable length 10m	
	GT09-C200R40502-6C	Cable length 20m	
	GT09-C300R40502-6C	Cable length 30m	
	GT09-C30R40503-15P	Cable length 3m	For connecting GOT to TOSHIBA PLC
	GT09-C100R40503-15P	Cable length 10m	
	GT09-C200R40503-15P	Cable length 20m	
	GT09-C300R40503-15P	Cable length 30m	

Connection cables for HITACHI IES PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20401-15P	Cable length 3m	For connecting GOT to HITACHI IES PLC, intelligent serial port module
	GT09-C30R20402-15P	Cable length 3m	For connecting GOT to HITACHI IES PLC
RS-422 cable	GT09-C30R40401-7T	Cable length 3m	For connecting GOT to HITACHI IES intelligent serial port module
	GT09-C100R40401-7T	Cable length 10m	
	GT09-C200R40401-7T	Cable length 20m	
	GT09-C300R40401-7T	Cable length 30m	

Connection cables for HITACHI PLCs (Sold separately)

Product name	Model name	Description	
RS-232 Cable	GT09-C30R21301-9S	Cable length 3m	For connecting GOT to HITACHI communication module (LQE560/LQE060/LQE160)
RS-422 Cable	GT09-C30R41301-9S	Cable length 3m	For connecting GOT to HITACHI PLC (LPQ510) and communication module (LQE565/LQE165)
	GT09-C100R41301-9S	Cable length 10m	
	GT09-C200R41301-9S	Cable length 20m	
	GT09-C300R41301-9S	Cable length 30m	

Connection cables for FUJI FA PLCs (Sold separately)

Product name	Model name	Description	
RS-232 Cable	GT09-C30R21003-25P	Cable length 3m	For connecting GOT to FUJI FA RS-232C interface card(NV1L-RS2), RS-232C/485 interface capsule(FFK120A-C10), and general-purpose interface module(NC1L-RS2/FFU120B)
RS-422 Cable	GT09-C30R41001-6T	Cable length 3m	For connecting GOT to FUJI FA RS-232C/485 interface capsule(FFK120A-C10) and general-purpose interface module(NC1L-RS4/FFU120B)
	GT09-C100R41001-6T	Cable length 10m	
	GT09-C200R41001-6T	Cable length 20m	
	GT09-C300R41001-6T	Cable length 30m	

Connection cables for MATSUSHITA PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20901-25P	Cable length 3m	For connecting GOT to MATSUSHITA RS422/232C conversion adapter
	GT09-C30R20902-9P	Cable length 3m	For connecting GOT to the tool port or RS232C port of MATSUSHITA PLC, computer communication unit
	GT09-C30R20903-9P	Cable length 3m	For connecting GOT to the RS232C port of MATSUSHITA PLC
	GT09-C30R20904-3C	Cable length 3m	For connecting GOT to the RS232C port of MATSUSHITA PLC

Connection cables for YASKAWA PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20201-9P	Cable length 3m	For connecting GOT to YASKAWA PLC
	GT09-C30R20202-15P	Cable length 3m	
	GT09-C30R20203-9P	Cable length 3m	
	GT09-C30R20204-14P	Cable length 3m	
	GT09-C30R20205-25P	Cable length 3m	For connecting GOT to YASKAWA MEMOBUS module
RS-422 cable	GT09-C30R40201-9P	Cable length 3m	For connecting GOT to YASKAWA MEMOBUS module
	GT09-C100R40201-9P	Cable length 10m	
	GT09-C200R40201-9P	Cable length 20m	
	GT09-C300R40201-9P	Cable length 30m	
	GT09-C30R40202-14P	Cable length 3m	For connecting GOT to YASKAWA PLC
	GT09-C100R40202-14P	Cable length 10m	
	GT09-C200R40202-14P	Cable length 20m	
	GT09-C300R40202-14P	Cable length 30m	

Connection cables for YOKOGAWA PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20301-9P	Cable length 3m	For connecting GOT to YOKOGAWA CPU port/D-Sub 9-pin conversion cable
	GT09-C30R20302-9P	Cable length 3m	For connecting GOT to YOKOGAWA PC link module
	GT09-C30R20304-9S	Cable length 3m	For connecting GOT to YOKOGAWA converter (ML2- □)
RS-422 cable	GT09-C30R40301-6T	Cable length 3m	For connecting GOT to YOKOGAWA PC link module
	GT09-C100R40301-6T	Cable length 10m	
	GT09-C200R40301-6T	Cable length 20m	
	GT09-C300R40301-6T	Cable length 30m	
	GT09-C30R40302-6T	Cable length 3m	
	GT09-C100R40302-6T	Cable length 10m	
	GT09-C200R40302-6T	Cable length 20m	
	GT09-C300R40302-6T	Cable length 30m	
	GT09-C30R40303-6T	Cable length 3m	For connecting GOT to YOKOGAWA temperature controller (GREEN series)
	GT09-C100R40303-6T	Cable length 10m	
	GT09-C200R40303-6T	Cable length 20m	
	GT09-C300R40303-6T	Cable length 30m	
	GT09-C30R40304-6T	Cable length 3m	For connecting GOT to YOKOGAWA temperature controller (UT2000 series)
	GT09-C100R40304-6T	Cable length 10m	
	GT09-C200R40304-6T	Cable length 20m	
	GT09-C300R40304-6T	Cable length 30m	

Connection cables for ALLEN-BRADLEY PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20701-9S	Cable length 3m	For connecting GOT to ALLEN-BRADLEY PLC

Connection cables for SIEMENS PLCs (Sold separately)

Product name	Model name	Description	
RS-232 cable	GT09-C30R20801-9S	Cable length 3m	For connecting GOT to SIEMENS HMI Adapter

RS-422 conversion unit (Sold separately)

Product name	Model name	Description	
RS-422 conversion unit	GT15-RS2T4-9P	RS-232 → RS-422 conversion unit	RS-422 side connector 9 pins
	GT15-RS2T4-25P		RS-422 side connector 25 pins

Bus extension connector box (Sold separately)

Product name	Model name	Description
Bus extension connector box	A9GT-QCNB	For QCPU (Q Mode)/Motion controller CPU (Q series) long distance (13.2m or longer) bus connection

Bus connector conversion box (Sold separately)

Product name	Model name	Description
Bus connector conversion box	A7GT-CNB	For QnA/ACPU/Motion controller CPU (A series) long distance bus connection (For conversion from large type connector to small type connector)

CF card (Sold separately)

Product name	Model name	Description
CF card	GT05-MEM-16MC	Flash ROM 16MB
	GT05-MEM-32MC	Flash ROM 32MB
	GT05-MEM-64MC	Flash ROM 64MB
	GT05-MEM-128MC	Flash ROM 128MB
	GT05-MEM-256MC	Flash ROM 256MB
	—	Commercially-available CF card *2

*2: Some models with the operations checked by our company are usable.
For the operation-checked models, refer to "List of valid devices applicable for GOT1000 series" (T10-0039) separately available.
The Technical News above is available as a reference at the information site for Mitsubishi industrial automation products MELFANSweb home page.
(MELFANSweb website: http://wwwf2.mitsubishielectric.co.jp/english/index.html)

Bar code reader (Sold separately)

Product name	Model name	Description
Bar code reader	—	Commercially-available bar code reader *3

*3: Some models with the operations checked by our company are usable.
For the operation-checked models, refer to "List of valid devices applicable for GOT1000 series" (T10-0039) separately available.
The Technical News above is available as a reference at the information site for Mitsubishi industrial automation products MELFANSweb home page.
(MELFANSweb website: http://wwwf2.mitsubishielectric.co.jp/english/index.html)

RFID controller (Sold separately)

Product name	Model name	Description
RFID controller	—	Commercially-available RFID controller *4

*4: Some models with the operations checked by our company are usable.
For the operation-checked models, refer to "List of valid devices applicable for GOT1000 series" (T10-0039) separately available.
The Technical News above is available as a reference at the information site for Mitsubishi industrial automation products MELFANSweb home page.
(MELFANSweb website: http://wwwf2.mitsubishielectric.co.jp/english/index.html)

Memory card adaptor (Sold separately)

Product name	Model name	Description
Memory card adaptor	GT05-MEM-ADPC	CF card to memory card (Type II) conversion adaptor

Option function board (Sold separately)

Product name	Model name	Description
Option function board	GT15-FNB	Option function board
	GT15-QFNB	Option function board Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
	GT15-QFNB16M	Option function board with add-on memory (Option function+16MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
	GT15-QFNB32M	Option function board with add-on memory (Option function+32MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
	GT15-QFNB48M	Option function board with add-on memory (Option function+48MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
	GT15-MESB48M	Option function board with add-on memory (Option function+48MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, document display function, and MES interface function

Multi color display board (Sold separately)

Product name	Model name	Description
Multi-color display board	GT15-XHNB	Multi-color display board for XGA (For 65536-color display) Multi-color display board for SVGA/VGA (For 65536-color display) *5
	GT15-VHNB	Multi-color display board for SVGA/VGA (For 65536-color display)

*5: To use it for a SVGA or VGA GOT, install the following OS to the GOT.

(Cannot be used for a SVGA or VGA GOT without installing the OS.)

Boot OS Ver. 02.01.00.E or later

Standard monitor OS: Ver. 02.01.00 or later

For how to install the OS, refer to GT Designer2 Version □ Basic Operation/Data Transfer Manual.

Option unit (Sold separately)

Product name	Model name	Description	
Printer unit	GT15-PRN	For connecting a printer	USB slave (PictBridge) 1 channel
Video input unit	GT15V-75V4	For NTSC/PAL input 4 channels	
RGB input unit	GT15V-75R1	For analog RGB input 1 channel	
Video/RGB input unit	GT15V-75V4R1	For NTSC/PAL (4ch)/analog RGB (1ch) mixed input	
RGB output unit	GT15V-75ROUT	For analog RGB output	
CF card unit	GT15-CFCD	For CF card installation (B drive)	
CF card extention unit	GT15-CFEX-C08SET	For CF card installation (B drive)	
External I/O unit	GT15-DIO	For connecting an external I/O device/operation panel	
Sound output unit	GT15-SOUT	For sound output	

Option unit dedicated cable (Sold separately)

Product name	Model name	Description	
Dedicated printer connection cable *6	GT09-C30USB-5P	Cable length 3m	For connecting GOT (USB mini) to printer (USB)

*6: Included with an option unit at the time of purchase.

Stand (Sold separately)

Product name	Model name	Description
Stand	GT15-90STAND	Stand for 15"
	GT15-80STAND	Stand for 12.1"
	GT15-70STAND	Stand for 8.4"/10.4"
	GT05-50STAND	Stand for 5.7"

Battery (Sold separately)

Product name	Model name	Description
Battery	GT15-BAT	Battery for clock data and maintenance report data backups

Protective sheet (Sold separately)

Product name	Model name	Description	
Protective sheet	GT15-90PSCB	15" protective sheet	Clear 5 sheets
	GT15-90PSGB		Antiglare 5 sheets
	GT15-90PSCW		Clear (Frame: white) 5 sheets
	GT15-90PSGW		Antiglare (Frame: white) 5 sheets
	GT15-80PSCB	12.1" protective sheet	Clear 5 sheets
	GT15-80PSGB		Antiglare 5 sheets
	GT15-80PSCW		Clear (Frame: white) 5 sheets
	GT15-80PSGW		Antiglare (Frame: white) 5 sheets
	GT15-70PSCB	10.4" protective sheet	Clear 5 sheets
	GT15-70PSGB		Antiglare 5 sheets
	GT15-70PSCW		Clear (Frame: white) 5 sheets
	GT15-70PSGW		Antiglare (Frame: White) 5 sheets
	GT15-60PSCB	8.4" protective sheet	Clear 5 sheets
	GT15-60PSGB		Antiglare 5 sheets
	GT15-60PSCW		Clear (Frame: white) 5 sheets
	GT15-60PSGW		Antiglare (Frame: white) 5 sheets
	GT15-50PSCB	5.7" protective sheet	Clear 5 sheets
	GT15-50PSGB		Antiglare 5 sheets
	GT15-50PSCW		Clear (Frame: white) 5 sheets
	GT15-50PSGW		Antiglare (Frame: white) 5 sheets

Protective cover for oil (Sold separately)

Product name	Model name	Description
Protective cover for oil	GT05-90PCO	For 15" GOT
	GT05-80PCO	For 12.1" GOT
	GT05-70PCO	For 10.4" GOT
	GT05-60PCO	For 8.4" GOT
	GT05-50PCO	For 5.7" GOT

Backlight (Sold separately)

Product name	Model name	Description	
Backlight *7	GT15-90XLTT	For 15" high intensity, wide angle view TFT (XGA)	GT1595-X
	GT15-80SLTT	For 12.1" high intensity, wide angle view TFT (SVGA)	GT1585V-S, GT1585-S
	GT15-70SLTT	For 10.4" high intensity, wide angle view TFT (SVGA)	GT1575-S (Function version B or earlier)
	GT15-70VLTT	For 10.4" high intensity, wide angle view TFT (SVGA, VGA)	GT1575V-S, GT1575-V, GT1575-S (Function version C or later)
	GT15-70VLTN	For 10.4" TFT (VGA)	GT1575-VN, GT1572-VN
	GT15-60VLTT	For 8.4" high intensity, wide angle view TFT (VGA)	GT1565-V
	GT15-60VLTN	For 8.4" TFT (VGA)	GT1562-VN

*7: At GOT purchase, it is installed in the main unit.

USB environmental protection cover (Sold separately)

Product name	Model name	Description	
USB environmental protection cover *8	GT15-UCOV	Environmental cover for USB interface on the GOT main unit front side (For complying IP67)	15", 12.1", 10.4", 8.4"
	GT11-50UCOV	Environmental cover for USB interface on the GOT main unit front side (For complying IP67)	5.7"

*8: At GOT purchase, it is installed in the main body.

Attachment (Sold separately)

Product name	Model name	Description		
		Applicable GOT screen size	GOT model to be replaced	Alternative GOT model
Attachment	GT15-70ATT-98	10.4"	A985GOT*9	→ GT157□
	GT15-70ATT-87		A870GOT-SWS A870GOT-TWS A8GT-70GOT-TW A8GT-70GOT-TB A8GT-70GOT-SW A8GT-70GOT-SB	
	GT15-60ATT-97	8.5"	A97□GOT	→ GT156□
	GT15-60ATT-96		A960GOT	
	GT15-60ATT-87		A870GOT-EWS A8GT-70GOT-EW A8GT-70GOT-EB A77GOT-EL-S5 A77GOT-EL-S3 A77GOT-EL	
	GT15-60ATT-77		A77GOT-CL-S5 A77GOT-CL-S3 A77GOT-CL A77GOT-L-S5 A77GOT-L-S3 A77GOT-L	
	GT15-50ATT-95W	5.7"	A956WGOT	→ GT155□ GT115□
	GT15-50ATT-85		A85□GOT	

*9 The GP250□ and GP260□ manufactured by Digital Electronics Corporation can also be replaced with the 10.4" GOT1000.

Drawing software (Sold separately)

Product name	Model name	Description
GT Designer2	SW □ D5C-GTD2-J (□ indicates the version)*10	Drawing software for GOT1000/GOT900 series

* 10: The □ is assigned with an integer 2 or more.

PC connection cable (Sold separately)

Product name	Model name	Description	
Project data transfer cable	GT01-C30R2-9S	Cable length 3m	For connecting GOT (D sub 9-pin female) and PC (D sub 9-pin female)
	GT01-C30R2-25P	Cable length 3m	For connecting GOT (D sub 9-pin female) and PC (D sub 25-pin male)
	GT09-C20USB-5P	Cable length 2m	For connecting GOT (USB mini) and PC (USB)
	GT09-C30USB-5P	Cable length 3m	For connecting GOT (USB mini) and PC (USB)

3. SPECIFICATIONS

3.1 General Specifications

<table>
<tr><th colspan="2">Item</th><th colspan="7">Specifications</th></tr>
<tr><td rowspan="2">Operating ambient temperature*1</td><td>Display section</td><td colspan="7">0 to 50°C</td></tr>
<tr><td>Other than the display section</td><td colspan="7">0 to 55°C</td></tr>
<tr><td colspan="2">Storage ambient temperature</td><td colspan="7">-20 to 60°C</td></tr>
<tr><td colspan="2">Operating ambient humidity*6</td><td colspan="7">10 to 90% RH, non-condensing</td></tr>
<tr><td colspan="2">Storage ambient humidity*6</td><td colspan="7">10 to 90% RH, non-condensing</td></tr>
<tr><td colspan="2" rowspan="5">Vibration resistance*2</td><td rowspan="5">Compliant with JIS B3502 and IEC61131-2</td><td></td><td>Frequency</td><td>Acceleration</td><td>Half-amplitude</td><td>Sweep count</td></tr>
<tr><td rowspan="2">Under intermittent vibration</td><td>5 to 9Hz</td><td>-</td><td>3.5mm</td><td rowspan="4">10 times each in X, Y and Z directions</td></tr>
<tr><td>9 to 150Hz</td><td>9.8m/s^2</td><td>-</td></tr>
<tr><td rowspan="2">Under continuous vibration</td><td>5 to 9Hz</td><td>-</td><td>1.75mm</td></tr>
<tr><td>9 to 150Hz</td><td>4.9m/s^2</td><td>-</td></tr>
<tr><td colspan="2">Shock resistance</td><td colspan="7">Compliant with JIS B3502, IEC 61131-2 (147 m/s^2, 3 times each in X, Y and Z directions)</td></tr>
<tr><td colspan="2">Operating atmosphere</td><td colspan="7">No corrosive gas</td></tr>
<tr><td colspan="2">Operating altitude*3</td><td colspan="7">2000 m (6562 ft) max.</td></tr>
<tr><td colspan="2">Installation location</td><td colspan="7">Inside control panel</td></tr>
<tr><td colspan="2">Overvoltage category*4</td><td colspan="7">II or less</td></tr>
<tr><td colspan="2">Pollution degree*5</td><td colspan="7">2 or less</td></tr>
<tr><td colspan="2">Cooling method</td><td colspan="7">Self-cooling</td></tr>
</table>

*1 When mounting an extension unit on the upper stage of MELSECNET/H communication unit (GT15-J71LP23-25, GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13), the operating ambient temperature must be reduced 5°C against the maximum values described in general specifications.

*2 When using the MELSECNET/10 communication unit (GT15-75J71LP23-Z, GT15-75J71BR13-Z) or CC-Link communication unit (GT15-75J61BT13-Z), refer to the manual of the communication unit you use. (Differs with the specification of GOT.)

*3 Do not use or store the GOT under pressure higher than the atmospheric pressure of altitude 0m (0ft.). Failure to observe this instruction may cause a malfunction.

*4 This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within the premises.
Category II applies to equipment for which electrical power is supplied from fixed facilities.
The surge voltage withstand level for up to the raged voltage of 300 V is 2500 V.

*5 This index indicates the degree to which conductive material is generated in the environment where the equipment is used.
In pollution degree 2, only non-conductive pollution occurs but temporary conductivity may be produced due to condensation.

*6 The wet-bulb temperature is 39°C or less for STN LCDs.

3.2 Performance Specifications

The performance specifications of the GT15 is as follows.

☞ ▪ 3.2.1 GT1595-X
▪ 3.2.2 GT1585V-S, GT1585-S
▪ 3.2.3 GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN
▪ 3.2.4 GT1565-V, GT1562-VN
▪ 3.2.5 GT1555-V, GT1555-Q, GT1550-Q

3.2.1 GT1595-X

Item		Specifications	
		GT1595-XTBA	GT1595-XTBD
Display section[*1]	Type	TFT color liquid crystal display (High intensity and wide angle view)	
	Screen size	15"	
	Resolution	1,024 × 768 dots	
	Display size	304.1(12.0)(W) × 228.1(8.98)(H) [mm](inch)	
	Display character	16-dot standard font: 64 characters × 48 lines (2byte character)	
		12-dot standard font: 85 characters × 64 lines (2byte character)	
	Display color	65536 colors[*2]	
	Display angle	Left/Right: 75 degrees Top: 50 degrees Bottom: 60 degrees	
	Intensity of LCD only	450 [cd/m²]	
	Intensity adjustment	8-level adjustment	
	Life	Approx. 52,000 h (Operating ambient temperature : 25°C)	
Backlight		Cold cathode fluorescent tube (replaceable) backlight shutoff detection function is included Backlight off/screen saving time can be set.	
	Life[*3]	Approx. 50,000 h or longer (Time when display luminance reaches 50% at the operating ambient temperature of 25°C)	
Touch panel	Type	Analog resistive film	
	Key size	Minimum 2 × 2 dots (per key)	
	Number of objects that can be simultaneously touched	Simultaneous presses not allowed. (Only 1 point can be touched.)	
	Life	1 million times or more (operating force 0.98N max.)	

(Continued to next page)

Item			Specifications	
			GT1595-XTBA	GT1595-XTBD
Human sensor	Detection length		1(39.37) [m](inch)	
	Detection range		Left/Right/Top/Bottom: 70 degrees	
	Detection delay time		0 to 4s	
	Detection temperature		Temperature difference between human body and ambient air: 4°C or higher	
Memory*4	C drive		Built-in flash memory 9Mbytes (for storing project data and OS)	
		Life (Number of write times)	100,000 times	
Battery			GT15-BAT lithium battery (Option)	
	Backup target		Clock data and maintenance time notification data	
	Life		Approx. 5 years (Operating ambiant temperature of 25°C)	
Built-in interface	RS-232*6		RS-232, 1ch Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps Connector shape: D-sub 9-pin (Male) Application: For communicating with a controller or connecting a personal computer (Project data upload/download, OS installation, FA transparent function)	
	USB		USB (Full Speed 12Mbps), Device, 1ch Connector shape: Mini-B Application: For connecting a personal computer (Project data upload/download, OS installation, FA transparent function)	
	CF card		Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup	
	Option function board		For option function board mounting, 1ch	
	Multi-color display board		For multi-color display board mounting, 1ch	
	Extension unit*6		For communication unit/option unit mounting, 2ch	
Buzzer output			Single tone (tone length adjustable)	
Protective structure			Outside the enclosure: IP67*5 Inside the enclosure: IP2X	
External dimensions (Excluding USB environmental protection cover)			397(15.6)(W) × 296(11.7)(H) × 61(2.40)(D)[mm](inch)	
Panel cutting dimensions			383.5(15.1)(W) × 282.5(11.1)(H)[mm](inch)	
Weight			5.0kg(11.0lb) (mounting fixtures are not included)	
Compatible software package (GT Designer2 Version)			2.17T or later	2.32J or later

*1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. Please note that these dots appear due to its characteristic and are not caused by product defect.

*2 With the hardware version indicated below, it will be 256 colors when the multi-color display board is not installed. For how to confirm the function version, refer to the following.

☞ Appendix Confirming of Versions and Conformed Standards

Item	Model	Function version
GT1595	GT1595-XTBA	A

*3 The GOT screen saving/backlight off function prevents images from becoming permanently etched on the display screen and increases the backlight life.

*4 ROM in which new data can be written without deleting the written data.

*5 Compliant with IP67 when the USB environmental protection cover is attached. Compliant with IP2X at the USB interface only when a USB cable is connected. Note that this does not guarantee all users' operation environment.

*6 For using multiple extension units, a bar code reader, or a RFID controller, the total current for the extension units, bar code reader, or RFID controller must be within the current that the GOT can supply.
For the current for the extension units, bar code reader or RFID controller, and the current that the GOT can supply, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (2.8 Multi-channel Function)

3.2.2 GT1585V-S, GT1585-S

Item			Specifications			
			GT1585V-STBA	GT1585V-STBD	GT1585-STBA	GT1585-STBD
Display section*1	Type		TFT color liquid crystal display (High intensity and wide angle view)			
	Screen size		12.1”			
	Resolution		800 × 600 dots			
	Display size		246(9.69)(W) × 184.5(7.26)(H) [mm](inch)			
	Display character		16-dot standard font: 50 characters × 37 lines (2byte character) 12-dot standard font: 66 characters × 50 lines (2byte character)			
	Display color		65536 colors*2			
	Display angle		Left/Right: 60 degrees Top: 40 degrees Bottom: 50 degrees		Left/Right:65 degrees Top:45 degrees Bottom:55 degrees	
	Intensity of LCD only		350 [cd/m^2]		400 [cd/m^2]	
	Intensity adjustment		8-level adjustment			
	Life		Approx. 50,000 h (Operating ambient temperature: 25°C)			
Backlight			Cold cathode fluorescent tube (replaceable) backlight shutoff detection function is included. Backlight off/screen saving time can be set.			
	Life*3		Approx. 50,000 h or longer (Time when display luminance reaches 50% at the operating ambient temperature of 25◦C)			
Touch panel	Type		Matrix resistive film			
	Number of touch keys		1,900 objects/screen (38 lines × 50 columns)			
	Key size		Minimum 16 × 16 dots (16 × 8 dots for the last line only) (per key)			
	Number of objects that can be simultaneously touched		Maximum of 2 objects			
	Life		1 million times or more (operating force 0.98N max.)			
Human Sensor	Detection length		1(39.37) [m](inch)			
	Detection range		Left/Right/Top/Bottom: 70 degrees			
	Detection delay time		0 to 4s			
	Detection temperature		Temperature difference between human body and ambient air: 4°C or higher			
Memory*4	C drive		Built-in flash memory 9Mbytes (for storing project data and OS)			
		Life (Number of write times)	100,000 times			
Battery			GT15-BAT lithium battery (Option)			
	Backup target		Clock data and maintenance time notification data			
	Life		Approx. 5 years (Operating ambient temperature of 25◦C)			

(Continued to next page)

Item		Specifications			
		GT1585V-STBA	GT1585V-STBD	GT1585-STBA	GT1585-STBD
Built-in interface	RS-232*6	RS-232, 1ch Transmission speed: 15,200/57,600/38,400/19,200/9,600/4,800 bps Connector shape: D-sub 9-pin (Male) Application: For communicating with a controller or connecting a personal computer (Project data upload/download, OS installation, FA transparent function)			
	USB	USB (Full Speed 12Mbps), Device, 1ch Connector shape: Mini-B Application: For connecting a personal computer (Project data upload/download, OS installation, FA transparent function)			
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup			
	Option function board	For option function board mounting, 1ch			
	Multi-color display board	For multi-color display board mounting, 1ch			
	Extension unit*6	For communication unit/option unit mounting, 2ch			
Buzzer output		Single tone (tone length adjustable)			
Protective structure		Outside the enclosure: IP67 *5 Inside the enclosure: IP2X			
External dimensions (Excluding USB environmental protection cover)		316(12.44)(W) × 242(9.53)(H) × 52(2.05)(D) [mm](inch)			
Panel cutting dimensions		302(11.89)(W) × 228(8.98)(H)[mm](inch)			
Weight		2.8 kg(6.2lb) (mounting fixtures are not included)			
Compatible software package (GT Designer2 Version)		2.32J or later		2.04E or later	2.17T or later

*1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. Please note that these dots appear due to its characteristic and are not caused by product defect.

*2 With the hardware version indicated below, it will be 256 colors when the multi-color display board is not installed. For how to confirm the function version, refer to the following.

☞ Appendix Confirming of Versions and Conformed Standards

Item	Model	Function version
GT1585	GT1585-STBA	A
	GT1585-STBD	A

*3 The GOT screen saving/backlight off function prevents images from becoming permanently etched on the display screen and increases the backlight life.

*4 ROM in which new data can be written without deleting the written data.

*5 Compliant with IP67 when the USB environmental protection cover is attached. Compliant with IP2X at the USB interface only when a USB cable is connected. Note that this does not guarantee all users' operation environment.

*6 For using multiple extension units, a bar code reader, or a RFID controller, the total current for the extension units, bar code reader, or RFID controller must be within the current that the GOT can supply.
For the current for the extension units, bar code reader or RFID controller, and the current that the GOT can supply, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (2.8 Multi-channel Function)

3.2.3 GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN

Item		Specifications			
		GT1575V-STBA, GT1575V-STBD	GT1575-STBA, GT1575-STBD	GT1575-VTBA, GT1575-VTBD	GT1575-VNBA, GT1575-VNBD, GT1572-VNBA, GT1572-VNBD
Display section*1	Type	TFT color liquid crystal (LCD of high intensity and wide angle view)			TFT color liquid crystal
	Screen size	10.4"			
	Resolution	800 × 600dots		640 × 480dots	
	Display size	211(8.31)(W) × 158(6.22)(H)[mm](inch)			
	Display character	16-dot standard font: 50 characters × 37 lines (2byte character) 12-dot standard font: 66 characters × 50 lines (2byte character)		16-dot standard font: 40 characters 30 lines (2byte character) 12-dot standard font: 53 characters 40 lines (2byte character)	
	Display color	65536 colors*2			GT1575-VN: 256color GT1572-VN: 16color
	Display angle	Left/Right/Top/ Bottom: 85 degrees		Left/ Right/Top/ Bottom: 85 degrees	Left/Right: 45 degrees Top: 30 degrees Bottom: 20 degrees
	Intensity of LCD only	400[cd/m^2]		380[cd/m^2]	200[cd/m^2]
	Intensity adjustment	8-level adjustment			4-level adjustment
	Life	Approx. 50,000 h (Operating ambient temparature: 25°C)		Approx. 41,000 h (Operating ambient temparature:25°C)	
Backlight		Cold cathode fluorescent tube (replaceable) backlight shutoff detection function is included. Backlight off/screen saving time can be set.			
	Life*3	Approx. 40,000 h or longer (Time when display luminance reaches 50% at the operating ambient temperature of 25°C)			
Touch panel	Type	Matrix resistive film			
	Number of touch keys	1,900 objects/screen (38 lines × 50 columns)		1,200 objects/screen (30 lines × 40 columns)	
	Key size	Minimum 16 × 16 dots (16 × 8 dots for the last line only)(per key)		Minimum 16 × 16 dots (per key)	
	Number of objects that can be simultaneously touched	Maximum of 2 objects			
	Life	1 million times or more (operating force 0.98 max.)			

(Continued to next page)

Item			Specifications			
			GT1575V-STBA, GT1575V-STBD	GT1575-STBA, GT1575-STBD	GT1575-VTBA, GT1575-VTBD	GT1575-VNBA, GT1575-VNBD, GT1572-VNBA, GT1572-VNBD
Human sensor	Detection length		None			
	Detection range		None			
	Detection delay time		None			
	Detection temperature		None			
Memory[*4]	C drive		Built-in flash memory 9Mbytes (for storing project data and OS)			Built-in flash memory 5Mbytes (for storing project data and OS)
		Life (Number of write times)	100,000 times			
Batery			GT15-BAT lithium battery (Option)			
	Backup target		Clock data and maintenance time notification data			
	Life		Approx. 5 years (Operating ambient temperature of 25°C)			
Built-in interface	RS-232[*6]		RS-232, 1ch Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps Connector shape: D-sub 9-pin (Male) Application: For communicating with a controller or connecting a personal computer (Project data upload/download, OS installation, FA transparent function)			
	USB		USB (Full Speed 12 Mbps), Device, 1ch Connector shape: Mini-B Application: For connecting a personal computer (Project data upload/download, OS installation, FA transparent function)			
	CF card		Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup			
	Option function board		For option function board mounting, 1ch			
	Multi-color display board		For multi-color display board mounting, 1ch			Cannot be used. (Even installed, 65536 colors will not be displayed.)
	Extension unit[*6]		For communication unit/option unit mounting, 2ch			
Buzzer output			Single tone (tone length adjustable)			
Protective structure			Outside the enclosure: IP67*5 Inside the enclosure: IP2X			
External dimensions (Excluding USB environmental protective cover)			303(11.93)(W) × 214(8.43)(H) × 49(1.93)(D)[mm](inch)			
Panel cutting dimensions			289(11.38)(W) × 200(7.87)(H)[mm](inch)			

(Continued to next page)

Item	Specifications			
	GT1575V-STBA, GT1575V-STBD	GT1575-STBA, GT1575-STBD	GT1575-VTBA, GT1575-VTBD	GT1575-VNBA, GT1575-VNBD, GT1572-VNBA, GT1572-VNBD
Weight	2.3 kg(5.1lb) (mounting fixtures are not included)	2.4 kg(5.3lb) (mounting fixtures are not included)		2.3 kg(5.1lb) (mounting fixtures are not included)
Compatible software package (GT Designer2 Version)	2.32J or later	GT1575-STBA: 2.04E or later GT1575-STBD: 2.17T or later	GT1575-VTBA: 2.04E or later GT1575-VTBD: 2.17T or later	2.17T or later

*1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. Please note that these dots appear due to its characteristic and are not caused by product defect.

*2 With the hardware version indicated below, it will be 256 colors when the multi-color display board is not installed. For how to confirm the function version, refer to the following.

☞ Appendix Confirming of Versions and Conformed Standards

Item	Model	Function version
GT1575	GT1575-STBA	A
	GT1575-STBD	A
	GT1575-VTBA	A
	GT1575-VTBD	A

*3 The GOT screen saving/backlight off function prevents images from becoming permanently etched on the display screen and increases the backlight life.

*4 ROM in which new data can be written without deleting the written data.

*5 Compliant with IP67 when the USB environmental protection cover is attached. Compliant with IP2X at the USB interface only when a USB cable is connected. Note that this does not guarantee all users' operation environment.

*6 For using multiple extension units, a bar code reader, or a RFID controller, the total current for the extension units, bar code reader, or RFID controller must be within the current that the GOT can supply.
For the current for the extension units, bar code reader or RFID controller, and the current that the GOT can supply, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (2.8 Multi-channel Function)

3.2.4 GT1565-V, GT1562-VN

Item			Specifications	
			GT1565-VTBA, GT1565-VTBD	GT1562-VNBA, GT1562-VNBD
Display section[*1]	Type		TFT color liquid crystal (LCD of high intensity and wide angle view)	TFT color liquid crystal
	Screen size		8.4"	
	Resolution		640×480dots	
	Display size		171(6.73)(W)×128(5.04)(H)[mm](inch)	
	Display character		16-dot standard font: 40 characters × 30 lines (2byte character) 12-dot standard font: 53 characters × 40 lines (2byte character)	
	Display color		65536 colors[*2]	16 colors
	Display angle		Left/Right: 65degrees Top: 50 degrees Bottom: 60 degrees	Left/Right: 45degrees Top: 20 degrees Bottom: 20 degrees
	Intensity of LCD only		380[cd/m^2]	150[cd/m^2]
	Intensity adjustment		8-level adjustment	4-level adjustment
	Life		Approx. 41,000 h (Operating ambient temperature: 25°C)	
Backlight			Cold cathode fluorescent tube (replaceable) backlight shutoff detection function is included. Backlight off/screen saving time can be set.	
	Life[*3]		Approx. 40,000 h or longer (Time when display luminance reaches 50% at the operating ambient temperature of 25°C)	
Touch panel	Type		Matrix resistive film	
	Number of touch keys		1,200 objects/screen (30 lines × 40 columns)	
	Key size		Minimum 16 × 16 dots (per key)	
	Number of objects that can be simultaneously touched		Maximum of 2 objects	
	Life		1 million times or more (operating force 0.98N max.)	
Human sensor	Detection length		None	
	Detection range		None	
	Detection delay time		None	
	Detection temperature		None	
Memory[*4]	C drive		Built-in flash memory 9Mbytes (for string project data and OS)	Built-in flash memory 5Mbytes (for string project data and OS)
		Life (Number of write times)	100,000 times	
Battery			GT-15BAT lithium battery (Option)	
	Backup target		Clock data and maintenance time notification data	
	Life		Approx. 5 years (Operating ambient temperature of 25°C)	

(Continued to next page)

Item		Specifications	
		GT1565-VTBA, GT1565-VTBD	GT1562-VNBA, GT1562-VNBD
Built-in interface	RS-232*6	RS-232, 1ch Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps Connector shape: D-sub 9-pin (Male) Application: For communicating with a controller or connecting a personal computer (Project data upload/download, OS installation, FA transparent function)	
	USB	USB (Full Speed 12 Mbps), Device, 1ch Connector shape: Mini-B Application: For connecting a personal computer (Project data upload/download, OS installation, FA transparent function)	
	CF card	Compact flash slot, 1ch Connector shape: TYPE 1 Application: Data transfer, data storage, GOT startup	
	Option function board	For option function board mounting, 1ch	
	Multi-color display board	For multi-color display board mounting, 1ch	Cannot be used. (Even installed, 65536 colors will not be displayed.)
	Extension unit*6	For communication unit/option unit mounting, 2ch	
Buzzer output		Single tone (tone length adjustable)	
Protective structure		Outside the enclosure: IP67*5 Inside the enclosure: IP2X	
External dimensions (Excluding USB environmental protective cover)		241(9.49)(W)×190(7.48)(H)×52(2.05)(D)[mm](inch)	
Panel cutting dimensions		227(8.94)(W)×176(6.93)(H)[mm](inch)	
Weight		1.9 kg(4.2lb) (mounting fixtures are not included)	
Compatible software package (GT Designer2 Version)		GT1565-VTBA: 2.04E or later, GT1565-VTBD: 2.17T or later	2.17T or later

*1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. Please note that these dots appear due to its characteristic and are not caused by product defect.

*2 With the hardware version indicated below, it will be 256 colors when the multi-color display board is not installed. For how to confirm the function version, refer to the following.

☞ Appendix Confirming of Versions and Conformed Standards

Item	Model	Function version
GT1565	GT1565-VTBA	A
	GT1565-VTBD	A

*3 The GOT screen saving/backlight off function prevents images from becoming permanently etched on the display screen and increases the backlight life.

*4 ROM in which new data can be written without deleting the written data.

*5 Compliant with IP67 when the USB environmental protection cover is attached. Compliant with IP2X at the USB interface only when a USB cable is connected. Note that this does not guarantee all users' operation environment.

*6 For using multiple extension units, a bar code reader, or a RFID controller, the total current for the extension units, bar code reader, or RFID controller must be within the current that the GOT can supply.
For the current for the extension units, bar code reader or RFID controller, and the current that the GOT can supply, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (2.8 Multi-channel Function)

3.2.5 GT1555-V, GT1555-Q, GT1550-Q

Item		Specifications			
		GT1555-VTBD	GT1555-QTBD	GT1555-QSBD	GT1550-QLBD
Display section *1	Type	TFT color liquid crystal (LCD of high intensity and wide angle view)		STN color liquid crystal	STN monochrome liquid crystal
	Screen size	5.7"			
	Resolution	640 × 480dots	320 × 240dots		
	Display size	115(4.53)(W) × 86(3.39)(H)[mm](inch)			
	Display character	16-dot standard font: 40 characters × 30 lines (2byte characters) 12-dot standard font: 53 characters × 40 lines (2byte characters)	16-dot standard font: 20 characters × 15 lines (2byte characters) 12-dot standard font: 26 characters × 20 lines (2byte characters)		
	Display color	65536color*2		4096color	monochrome (16-level)
	Display angle	Left/Right: 80 degrees Top: 80 degrees Bottom: 70 degrees	Left/Right: 70 degrees Top: 70 degrees Bottom: 50 degrees	Left/Right: 55 degrees Top: 65 degrees Bottom: 70 degrees	Left/Right: 45 degrees Top: 20 degrees Bottom: 40 degrees
	Intensity of LCD only	350[cd/m^2]	400[cd/m^2]	380[cd/m^2]	220[cd/m^2]
	Intensity adjustment	8-level adjustment			
	Contrast adjustment	None		16-level adjustment	
	Life	Approx. 50,000 h (Operating ambient temperature: 25°C)			
Backlight		Cold cathode fluorescent tube (nonreplaceable) backlight shutoff detection function is included. Backlight off/screen saving time can be set.			
	Life*2	Approx. 75,000 h or longer (Time when display luminance reaches 50% at the operating ambient temperature of 25°C)			Approx. 58,000 h or longer (Time when display luminance reaches 50% at the operating ambient temperature of 25°C)
Touch panel	Type	Matrix resistive film			
	Number of touch keys	1200 objects/screen (Matrix structure of 30 lines × 40 columns)	300 objects/screen (Matrix structure of 15 lines × 20 columns)		
	Key size	Minimum 16 × 16 dots (per key)			
Touch panel *6	Number of objects that can be simultaneously touched	Maximum of 2 objects			
	Life	1 million times or more (operating force 0.98N max.)			
Human sensor	Detection length	None			
	Detection range	None			
	Detection delay time	None			

(Continued to next page)

Item		Specifications			
		GT1555-VTBD	GT1555-QTBD	GT1555-QSBD	GT1550-QLBD
Human sensor	Detection temperature	None			
Memory *3	C drive	Built-in flash memory 9Mbytes (for string project data and OS)			
	Life (Number of write times)	100,000 times			
Battery		GT15-BAT lithium battery (Option)			
	Backup target	Clock data and maintenance time notification data			
	Life	Approx. 5 years (Operating ambient temperature of 25°C)			
Built-in interface	RS-232*5	RS-232, 1ch Transmission speed: 115,200/57,600/38,400/19,200/9,600/4,800 bps Connector shape: D-sub 9-pin (Male) Application: For communicating with a controller or connecting a personal computer (Project data upload/ download, OS installation and FA transparent function)			
	USB	USB (Full Speed 12 Mbps), Device, 1ch Connector shape: Mini-B Application: For connecting a personal computer (Project data upload/download, OS installation and FA transparent function)			
	CF card	Compact flash slot, 1ch Connector shape: TYPE 1 Application: Data transfer, data storage, GOT startup			
	Option function board	For option function board mounting, 1ch			
	Extension unit*5	For communication unit/option unit mounting, 1ch			
Buzzer output		Single tone (tone length adjustable)			
Protective structure		Outside the enclosure: IP67*4 Inside the enclosure: IP2X			
External dimensions (Excluding USB environmental protective cover)		167(6.6)(W) × 135(5.3)(H) × 56(2.2)(D)[mm](inch)			
Panel cutting dimensions		153(6.0)(W) × 121(4.8)(H)[mm](inch)			
Weight		1.1 kg(2.4lb) (mounting fixtures are not included)			
Compatible software package (GT Designer2 Version)		2.58L or later	2.32J or later		

*1 Bright dots (always lit) and dark dots (unlit) may appear on a liquid crystal display panel due to its characteristics. It is impossible to completely avoid this symptom, as the liquid crystal display comprises of a great number of display elements. Flickers may be observed depending on the display color. Please note that these dots and flickers appear due to its characteristic and are not caused by product defect.

*2 The GOT screen saving/backlight off function prevents images from becoming permanently etched on the display screen and increases the backlight life.

*3 ROM in which new data can be written without deleting the written data.

*4 Compliant with IP67 when the USB environmental protection cover is attached. Compliant with IP2X at the USB interface only when a USB cable is connected. Note that this does not guarantee all users' operation environment.

*5 For using multiple extension units, a bar code reader, or a RFID controller, the total current for the extension units, bar code reader, or RFID controller must be within the current that the GOT can supply.
For the current for the extension units, bar code reader or RFID controller, and the current that the GOT can supply, refer to the following manual.
☞ GT Designer2 Version □ Screen Design Manual (2-8 Multi-channel Function)

*6 The GT1555-V can be operated with a stylus pen.
With a stylus pen, small-sized touch switches can be certainly operated.
Use a stylus pen that satisfies the following specifications.
・Material: Polyacetal resin ・Pen tip radius: 0.8mm or more

3.3 Power Supply Specifications

The following describes the power supply specifications for the GT15.

☞ ▪ 3.3.1 For GOTs powered from the 100 to 240VAC power supply
▪ 3.3.2 For GOTs powered from the 24VDC power supply

Remark Operation at momentary failure

- If an instantaneous power failure occurs in the power supply and continues for more than the permissible period, the GOT will be reset.
- Make sure to power on the unit more than 5 seconds after power-off.

3.3.1 For GOTs powered from the 100 to 240VAC power supply

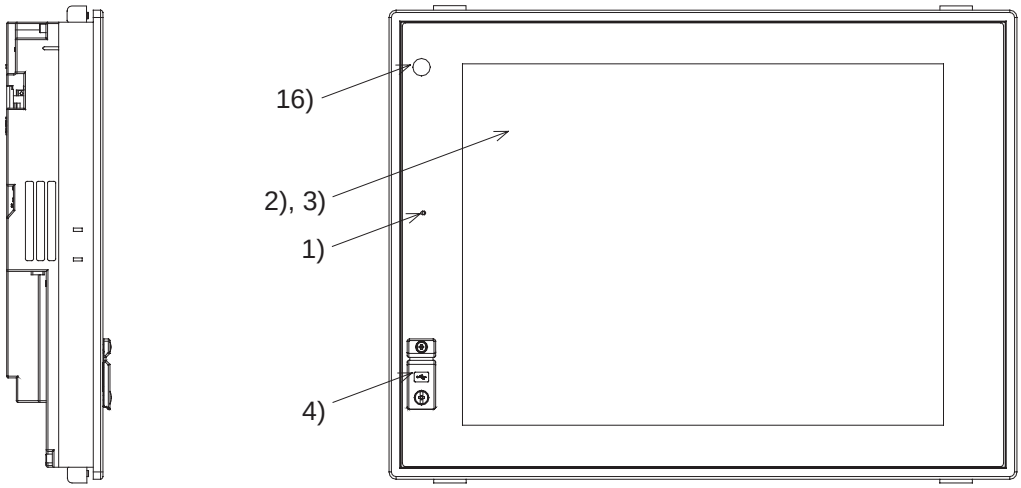
Item	Specifications		
	GT1595-XTBA	GT1585V-STBA, GT1585-STBA	GT1575V-STBA, GT1575-STBA, GT1575-VTBA, GT1575-VNBA, GT1572-VNBA, GT1565-VTBA, GT1562-VNBA
Input power supply voltage	100 to 240VAC (+10% -15%)		
Input frequency	50/60Hz ± 5%		
Input max. apparent power	110VA (maximum load)		
Power consumption	56W or less	41W or less	39W or less
At backlight off	30W or less	28W or less	
Inrush current	50A or less (4ms) (maximum load)	45A or less (4ms) (maximum load)	40A or less (4ms) (maximum load)
Permissible instantaneous power failure time	20ms or less (100VAC or more)		
Noise immunity	1,500Vp-p noise voltage, 1μs noise width (when measuring with a noise simulator under 25 to 60Hz noise frequency)		
Dielectric withstand voltage	1500VAC for 1 minute across power terminals and earth		
Insulation resistance	10MΩ or more across power terminals and earth by a 500V DC insulation resistance tester		
Applicable wire size	0.75 to 2 [mm^2]		
Applicable solderless terminal	Solderless terminal for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A		
Applicable tightening torque (Terminal block terminal screw)	0.5 to 0.8 [N•m]		

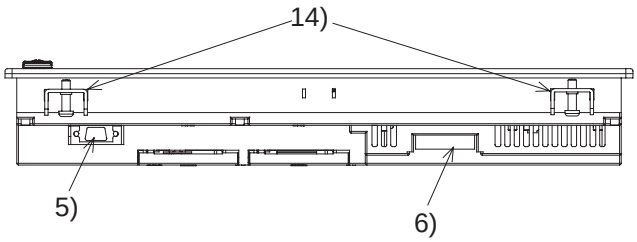
3.3.2 For GOTs powered from the 24VDC power supply

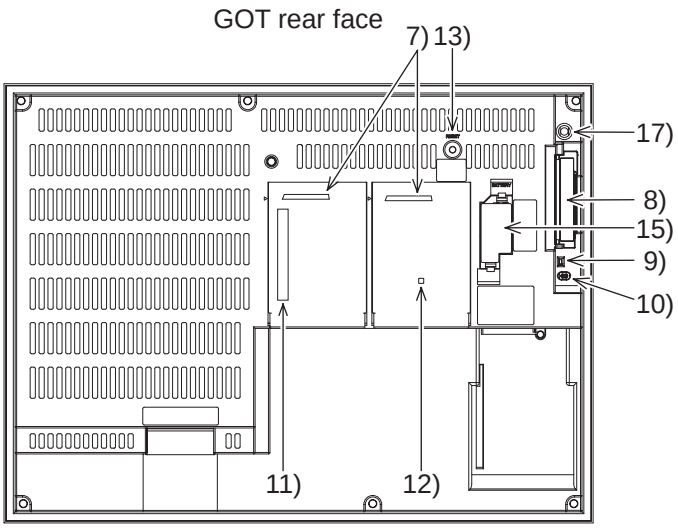
Item	Specifications						
	GT1595-XTBD	GT1585V-STBD, GT1585-STBD	GT1575V-STBD, GT1575-STBD, GT1575-VTBD, GT1575-VNBD, GT1572-VNBD, GT1565-VTBD, GT1562-VNBD	GT1555-V	GT1555-QTBD	GT1555-QSBD	GT1550-QLBD
Input power supply voltage	24VDC (+25%, -20%)						
Power consumption	57W or less (2380mA/ 24VDC)	43W or less (1790mA/ 24VDC)	41W or less (1710mA/ 24VDC)	19W or less (790mA/ 24VDC)	18W or less (750mA/ 24VDC)	17W or less (710mA/ 24VDC)	15W or less (620mA/ 24VDC)
At backlight off	32W or less (1330mA/ 24VDC)	30W or less (1250mA/24VDC)		14W or less (580mA/ 24VDC)	13W or less (540mA/24VDC)		
Inrush current	100A or less (4ms) (maximum load)	115A or less (1ms)(maximum load)		67A or less (1ms)(maximum load)	60A or less (1ms)(maximum load)		
Permissible instantaneous power failure time	10 ms or less						
Noise immunity	500Vp-p noise voltage, 1 μs noise width (when measuring with a noise simulator under 25 to 60Hz noise frequency)						
Dielectric withstand voltage	500VDC for 1 minute across power terminals and earth						
Insulation resistance	10MΩ or more across power terminals and earth by a 500V DC insulation resistance tester						
Applicable wire size	0.75 to 2 [mm²]						
Applicable solderless terminal	Solderess terminal for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A						
Applicable tightening torque (Terminal block terminal screw)	0.5 to 0.8 [N•m]						

4. PART NAME AND SETTINGS

4.1 Part Names and Settings of the GT1595







No.	Name	Description
1)	POWER LED	Lit in green : Power is correctly supplied Lit in orange : Screen saving Blinks in orange/green : Blown back light bulb Not lit : Power is not supplied
2)	Display screen	Displays the Utility and the user creation screen.
3)	Touch key	For operating the touch switches in the Utility and the user creation screen
4)	USB interface	For connecting a personal computer (Connector type: MINI-B)
5)	RS-232 interface	For communicating with a controller or connecting a personal computer (Connector type: D sub 9-pin)
6)	Power terminal	Power input terminal, LG terminal, FG terminal
7)	Extension interface	For installing an extension unit
8)	CF card interface	For installing a CF card
9)	CF card access LED	Lit : CF card accessed Not lit : CF card not accessed
10)	CF card access switch	Used for stopping the access to the CF card before removing the CF card from the GOT ON : CF card being accessed (CF card removal prohibited) OFF : CF card not accessed (CF card removal possible)
11)	Optional function board interface	For installing the optional function board
12)	Multi-color display board interface*1	For installing the multi-color display board
13)	Reset switch	Hardware reset switch (Inoperative in the bus connection or with the bus connection unit installed)
14)	Hole for unit installation fitting	Hole for inserting the unit installation fitting
15)	Battery holder	Houses the battery.
16)	Human sensor	Sensor that detects human movement
17)	Installation switch	Used for OS installations at the GOT startup

*1 For the multi-color display board, refer to the following.

3.2.1 GT1595-X

Remark

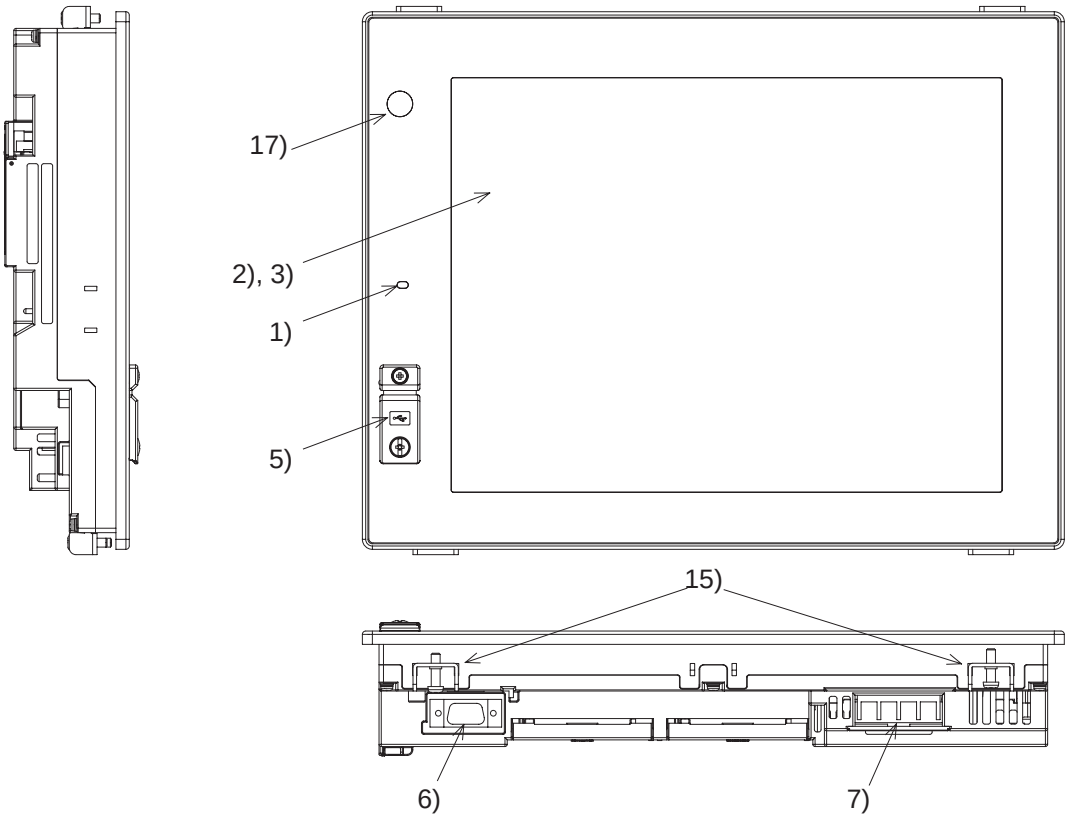
Connector used for the RS-232 interface

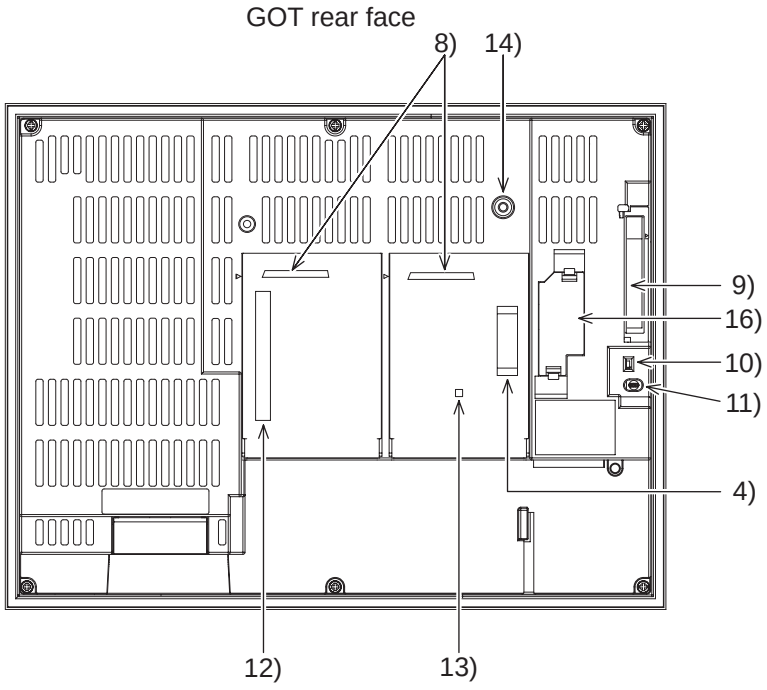
The specification of the cconnector used for the RS-232 interface of GT1595 is as follows.

Manufacturer :DDK Ltd.

Mode name :17LE-23090-27 (D4CK) or equivalent product

4.2 Part Names and Settings of the GT1585





No.	Name	Description
1)	POWER LED	Lit in green : Power is correctly supplied Lit in orange : Screen saving Blinks in orange/green : Blown back light bulb Not lit : Power is not supplied
2)	Display screen	Displays the utility and the user creation screen.
3)	Touch key	For operating the touch switches in the utility and the user creation screen
4)	Video/RGB interface*1	For installing the video input unit, RGB input unit, video/RGB input unit, or RGB output unit
5)	USB interface	For connecting a personal computer (Connector type: MINI-B)
6)	RS-232 interface	For communicating with a controller or connecting a personal computer (Connector type: D sub 9-pin)
7)	Power terminal	Power input terminal, LG terminal, FG terminal
8)	Extension interface	For installing an extension unit
9)	CF card interface	For installing a CF card
10)	CF card access LED	Lit : CF card accessed Not lit : CF card not accessed
11)	CF card access switch	Used for stopping the access to the CF card before removing the CF card from the GOT ON : CF card being accessed (CF card removal prohibited) OFF : CF card not accessed (CF card removal possible)
12)	Optional function board interface	For installing the optional function board
13)	Multi-color display board interface*2	For installing the multi-color display board
14)	Reset switch	Hardware reset switch (Inoperative in the bus connection or with the bus connection unit installed)
15)	Hole for unit installation fitting	Hole for inserting the unit installation fitting
16)	Battery holder	Houses the battery.
17)	Human sensor	Sensor that detects human movement

*1 It is provided for the GT1585V-S only.

*2 For the multi-color display board, refer to the following.

3.2.2 GT1585V-S, GT1585-S

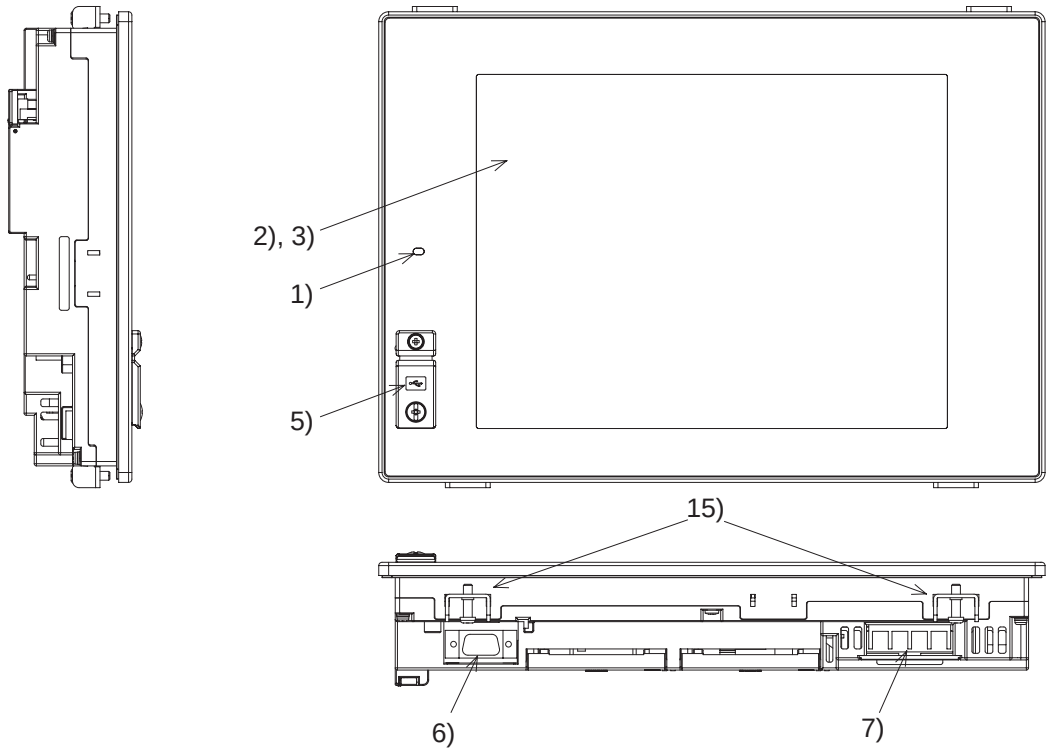
Point

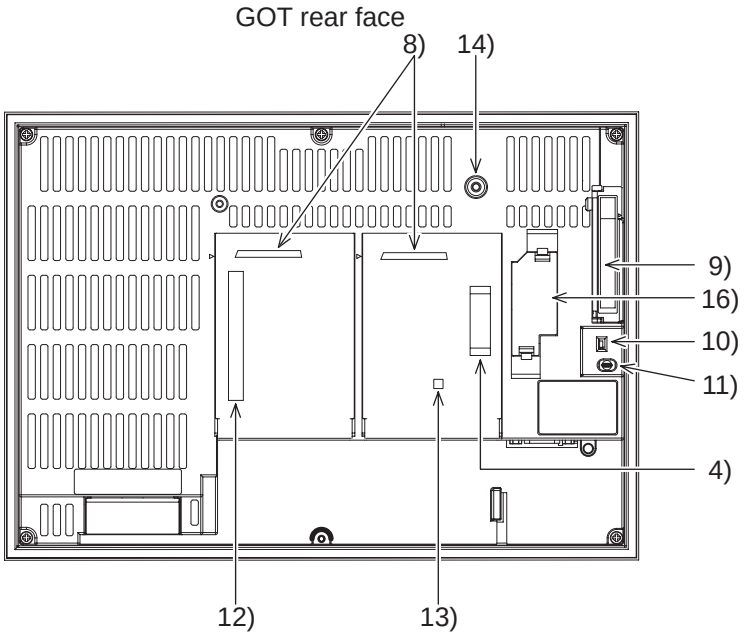
Connector used for the RS-232 interface

The specification of the connector used for the RS-232 interface of GT1585 is as follows.

GOT model name	Hardware version	Connector
GT1585V-STBA	A (March, 2006) or later	Manufacturer: DDK Ltd. Model name: 17LE-23090-27 (D4CK) or equivalent product
GT1585V-STBD	A (May, 2006) or later	
GT1585-STBA	B (April, 2005) or before	Manufacturer: Honda Tsushin Kogyo Co., Ltd. Model name: GM-C9RMDU11 or equivalent product
	C (April, 2005) or later	Manufacturer: DDK Ltd. Model name: 17LE-23090-27 (D4CK) or equivalent product
GT1585-STBD	A (July, 2005) or later	

4.3 Part Names and Settings of the GT157□





No.	Name	Description
1)	POWER LED	Lit in green : Power is correctly supplied Lit in orange : Screen saving Blinks in orange/green : Blown back light bulb Not lit : Power is not supplied
2)	Display screen	Displays the utility and the user creation screen.
3)	Touch key	For operating the touch switches in the utility and the user creation screen
4)	Video/RGB interface*1	For installing the video input unit, RGB input unit, video/RGB input unit, or RGB output unit
5)	USB interface	For connecting a personal computer (Connector type: MINI-B)
6)	RS-232 interface	For communicating with a controller or connecting a personal computer (Connector type: D sub 9-pin)
7)	Power terminal	Power input terminal, LG terminal, FG terminal
8)	Extension interface	For installing an extension unit
9)	CF card interface	For installing a CF card
10)	CF card access LED	Lit : CF card accessed Not lit : CF card not accessed
11)	CF card access switch	Used for stopping the access to the CF card before removing the CF card from the GOT ON : CF card being accessed (CF card removal prohibited) OFF : CF card not accessed (CF card removal possible)
12)	Optional function board interface	For installing the optional function board
13)	Multi-color display board interface*2	For installing the multi-color display board (For GT1575-VN and GT1572-VN, 65536 color display is not supported even with the multi-color display board installed.)
14)	Reset switch	Hardware reset switch (Inoperative in the bus connection or with the bus connection unit installed)
15)	Hole for unit installation fitting	Hole for inserting the unit installation fitting
16)	Battery holder	Houses the battery.

*1 It is provided for the GT1575V-S only.

*2 For the multi-color display board, refer to the following.

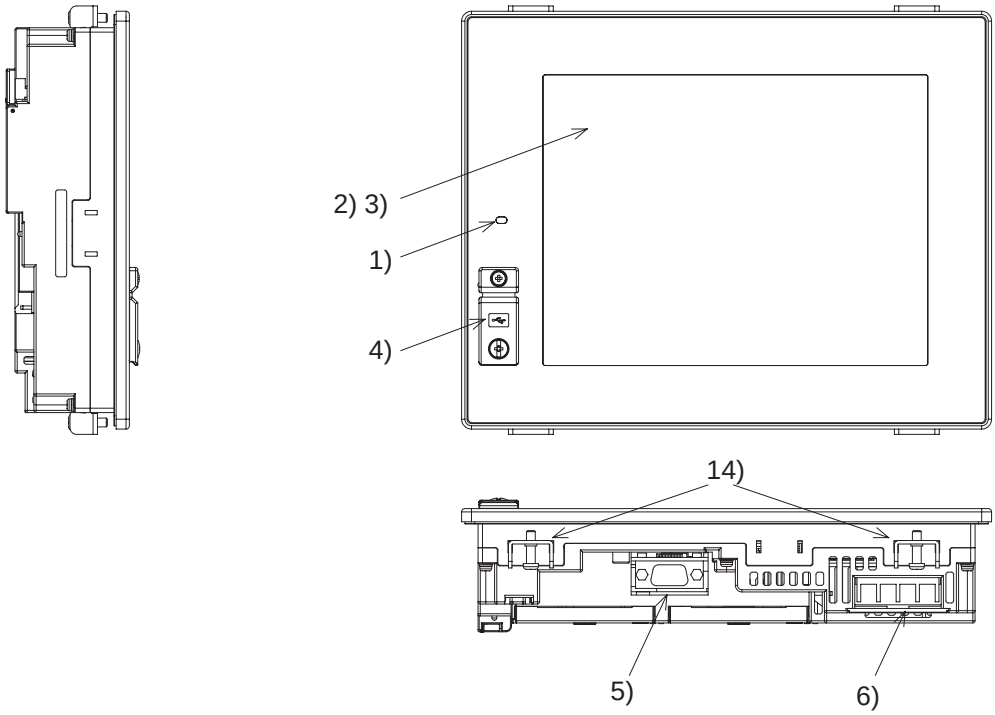
☞ 3.2.3 GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN

Remark Connector used for the RS-232 interface

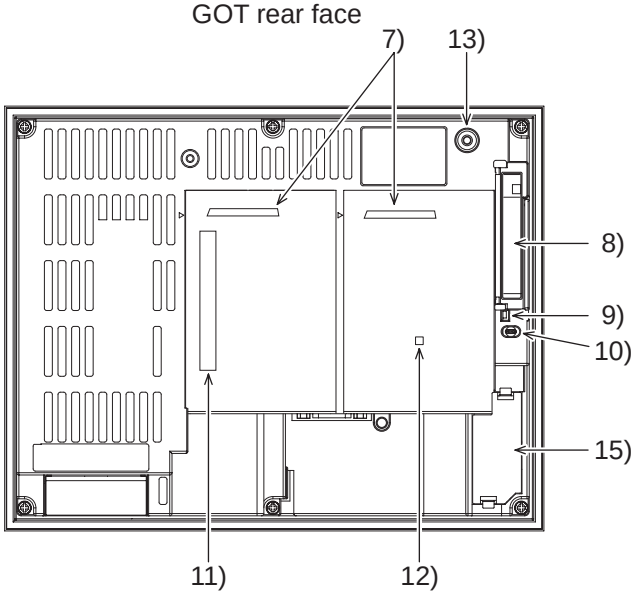
The specification of the connector used for the RS-232 interface of GT157□ is as follows.

GOT model name	Hardware version	Connector
GT1575-STBA	A (March, 2006) or later	Manufacturer: DDK Ltd. Model name: 17LE-23090-27 (D4CK) or equivalent product
GT1575-STBD	A (March, 2006) or later	
GT1575-STBA	B (April, 2005) or before	Manufacturer: Honda Tsushin Kogyo Co., Ltd. Model name: GM-C9RMDU11 or equivalent product
	C (April, 2005) or later	Manufacturer: DDK Ltd. Model name: 17LE-23090-27 (D4CK) or equivalent product
GT1575-STBD	A (July, 2005) or later	
GT1575-VTBA	D (April, 2005) or before	Manufacturer: Honda Tsushin Kogyo Co., Ltd. Model name: GM-C9RMDU11 or equivalent product
	E (April, 2005) or later	Manufacturer: DDK Ltd. Model name: 17LE-23090-27 (D4CK) or equivalent product
GT1575-VTBD	A (July, 2005) or later	
GT1575-VNBA	A (July, 2005) or later	
GT1575-VNBD	A (July, 2005) or later	
GT1572-VNBA	A (September, 2005) or later	
GT1572-VNBD	A (September, 2005) or later	

4.4 Part Names and Settings of the GT156□



GOT rear face



No.	Name	Description
1)	POWER LED	Lit in green : Power is correctly supplied Lit in orange : Screen saving Blinks in orange/green : Blown back light bulb Not lit : Power is not supplied
2)	Display screen	Displays the utility and the user creation screen.
3)	Touch key	For operating the touch switches in the utility and the user creation screen
4)	USB interface	For connecting a personal computer (Connector type: MINI-B)
5)	RS-232 interface	For communicating with a controller or connecting a personal computer (Connector type: D sub 9-pin)
6)	Power terminal	Power input terminal, LG terminal, FG terminal
7)	Extension interface	For installing an extension unit
8)	CF card interface	For installing a CF card
9)	CF card access LED	Lit : CF card accessed Not lit : CF card not accessed
10)	CF card access switch	Used for stopping the access to the CF card before removing the CF card from the GOT ON : CF card being accessed (CF card removal prohibited) OFF : CF card not accessed (CF card removal possible)
11)	Optional function board interface	For installing the optional function board
12)	Multi-color display board interface*1	For installing the multi-color display board (For GT1562-VN, 65536 color display is not supported even with the multi-color display board installed.)
13)	Reset switch	Hardware reset switch (Inoperative in the bus connection or with the bus connection unit installed)
14)	Hole for unit installation fitting	Hole for inserting the unit installation fitting
15)	Battery holder	Houses the battery.

*1 For the multi-color display board, refer to the following.

3.2.4 GT1565-V, GT1562-VN

Remark

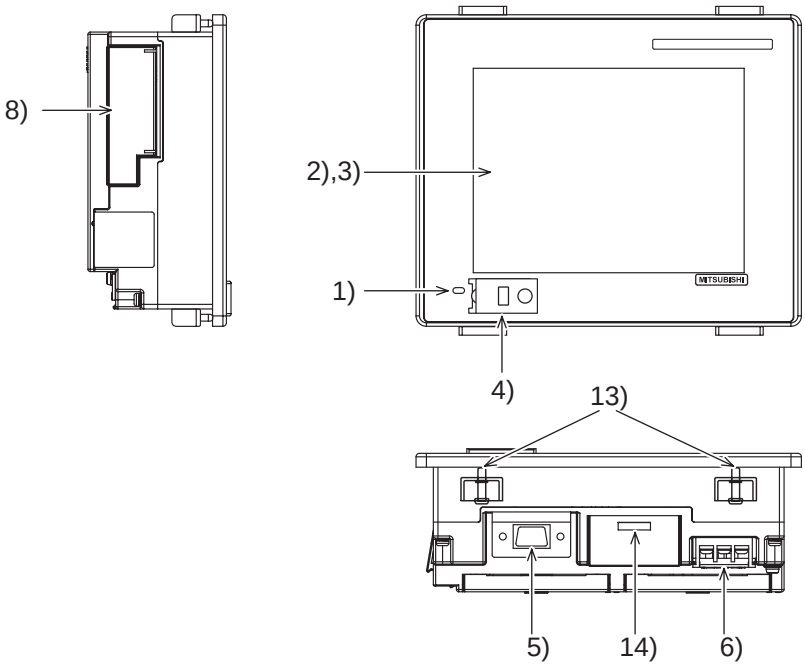
Connector used for the RS-232 interface

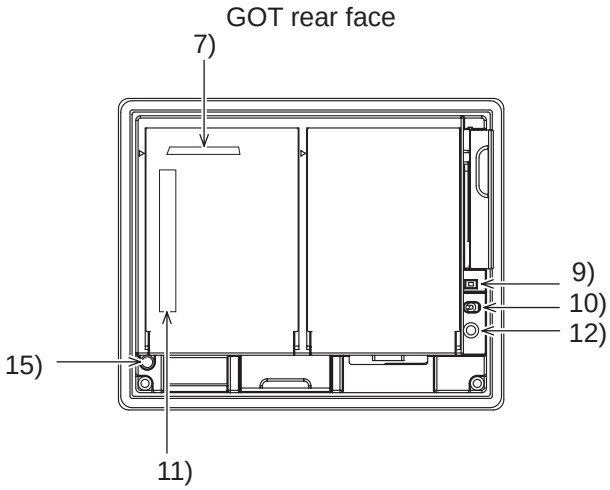
The specification of the connector used for the RS-232 interface of GT156□ is as follows.

Manufacturer :DDK Ltd.

Mode name :17LE-23090-27 (D4CK) or equivalent product

4.5 Part Names and Settings of the GT155□





No.	Name	Description
1)	POWER LED	Lit in green : Power is correctly supplied Lit in red : Screen saving Blinks in red : Blown back light bulb Not lit : Power is not supplied
2)	Display screen	Displays the Utility and the user creation screen
3)	Touch key	For operating touch switches in the Utility and the user creation screen
4)	USB interface	For connecting a personal computer (Connector type: MINI-B)
5)	RS-232 interface	For communicating with a controller or connecting a personal computer (Connector type: D sub 9-pin)
6)	Power terminal	Power input terminal, FG terminal
7)	Extension interface	For installing an extension unit
8)	CF card interface	For installing a CF card
9)	CF card access LED	Lit : CF card accessed Not lit : CF card not accessed
10)	CF card access switch	Used for stopping the access to the CF card before removing the CF card from the GOT ON : CF card being accessed (CF card removal prohibited) OFF : CF card not accessed (CF card removal possible)
11)	Optional function board interface	For installing the optional function board
12)	Reset switch	Hardware reset switch (Inoperative in the bus connection or with the bus connection unit installed)
13)	Hole for unit installation fitting	Hole for inserting the unit installation fitting
14)	Battery holder	Houses the battery
15)	Protective ground terminal	For earthing

Remark

Connector used for the RS-232 interface

The specification of the connector used for the RS-232 interface of GT155□ is as follows.

Manufacturer :DDK Ltd.

Mode name :17LE-23090-27 (D4CK) or equivalent product

5. EMC AND LOW VOLTAGE DIRECTIVE

For the products sold in European countries, the conformance to the EMC Directive, which is one of the European Directives, has been a legal obligation since 1996. Also, conformance to the Low Voltage Directive, another European Directives, has been a legal obligation since 1997.
Manufacturers who recognize their products must conform to the EMC and Low Voltage Directive are required to declare that their products conform to these Directives and put a "CE mark" on their products.

5.1 Requirements to Meet EMC Directive

EMC Directives are those which require "any strong electromagnetic force is not output to the external.: Emission (electromagnetic interference)" and "It is not influenced by the electromagnetic wave from the external.: Immunity (electromagnetic sensitivity)".
Items 5.1.1 thru 5.1.3 summarize the precautions to use GOT and configure the mechanical unit in order to match the EMC directives.
Though the data described herein are produced with our best on the basis of the requirement items and standards of the restrictions gathered by Mitsubishi, they do not completely guaranteed that all mechanical unit manufactured according to the data do not always match the above directives. The manufacturer itself which manufactures the mechanical unit must finally judge the method and others to match the EMC directives.

5.1.1 EMC directive

The standards of the EMC Directive are shown below.

Applied standard	Test standard	Test details	Standard value
EN61131-2 :2003	EN55011 Radiated noise*1	Electromagnetic emissions from the product are measured.	30M-230MHz QP: 30dBμV/m (30m in measurement range)*2, *3 230M-1000MHz QP: 37dBμV/m(30m in measurement range)*2, *3
	EN55011 Conducted noise*1	Electromagnetic emissions from the product to the power line is measured.	150k-500kHz QP:79dB, Mean: 66dB*2 500k-30MHz QP:73dB, Mean: 60dB*2
	EN61000-4-2 Electrostatic immunity*1	Immunity test in which static electricity is applied to the cabinet of the equipment.	±4kV Contact discharge ±8kV Aerial discharge
	EN61000-4-3 Radiated field AM modulation*1	Immunity test in which field is irradiated to the product.	80-1000MHz:10V/m 1.4-2GHz:10V/m 80%AM modulation@1kHz
	EN61000-4-4 Fast transient burst noise*1	Immunity test in which burst noise is applied to the power line and signal lines.	Power line:2kV Digital I/O(24V or higher): 1kV (Digital I/O(24V or less)) > 250V (Analog I/O, signal lines) > 250V
	EN61000-4-5 Surge immunity*1	Immunity test in which lightening surge is applied to the product.	AC power type Power line (between line and ground) : ±2kV Power line (between lines) : ±1kV Data communication port : ±1kV DC power type Power line (between line and ground) : ±0.5kV Power line (between lines) : ±1kV
	EN61000-4-6 Conducted RF immunity*1	Immunity test in which a noise inducted on the power and signal lines is applied.	Power line: 3V Data communication port: 3V
	Instantaneous power failure and voltage dips immunity	Test for checking normal operations at instantaneous power failure	AC power type 0.5 cycle (interval 1s or more) DC power type 10 ms (interval 1s or more)

(Continued to next page)

Applied standard	Test standard	Test details	Standard value
EN61131-2 :2003	Radiated RF immunity	Test for checking normal operations when the power supply unit input voltage is fluctuated.	AC power type 47Hz: 85V, 264V 63Hz: 85V, 264V DC power type 20.4V, 28.8V
	Third harmonic immunity	Test for checking normal operations when the AC power waveform mixed with third harmonic wave is input.	47Hz: 85V (phase 180°, distortion rate 10%) 63Hz: 132V (phase 0°, distortion rate 10.9%)
	External power supply fluctuation immunity	Test for checking if the unit becomes faulty with a transient voltage of the internal and external input sides of the power supply unit or unit power supply.	AC power type 47Hz: 85V 63Hz: 264V DC power type 19.2V, 30V

*1: The GOT is an open type device (device installed to another device) and must be installed in a conductive control panel.
The above test items are conducted in the condition where the GOT is installed on the conductive control panel and combined with the Mitsubishi PLC.

*2: QP: Quasi-peak value, Mean : Average value

*3: The above test items are conducted in the following conditions.
30M-230MHz QP: 40dBμV/m (10m in measurement range)
230M-1000MHz QP: 47dBμV/m (10m in measurement range)

5.1.2 Control panel

The GOT is an open type device (device installed to another device) and must be installed in a conductive control panel.
It not only assure the safety but also has a large effect to shut down the noise generated from GOT, on the control panel.

(1) Control panel

(a) The control panel must be conductive.

(b) When fixing a top or bottom plate of the control panel with bolts, do not coat the plate and bolt surfaces so that they will come into contact.
And connect the door and box using a thick grounding cable in order to ensure the low impedance under high frequency.

(c) When using an inner plate to ensure electric conductivity with the control panel, do not coat the fixing bolt area of the inner plate and control panel to ensure conductivity in the largest area as possible.

(d) Ground the control panel using a thick grounding cable in order to ensure the low impedance under high frequency.

(e) The diameter of cable holes in the control panel must be 10cm (3.94in.). In order to reduce the chance of radio waves leaking out, ensure that the space between the control panel and its door is small as possible.
Attach some EMI gaskets to fill up the space and suppress the leakage of radio waves.
Out test have been carried out on a panel having the damping characteristics of 37dB max. and 30dB mean (measured by 3m method with 30 to 300MHz).

(2) Connection of power and ground wires
Ground and power supply wires for the GOT must be connected as described below.

(a) Provide a grounding point near the GOT. Short-circuit the LG and FG terminals of the GOT (LG: line ground, FG: frame ground) and ground them with the thickest and shortest wire possible (The wire length must be 30cm (11.18in.) or shorter.) The LG and FG terminals function is to pass the noise generated in the PC system to the ground, so an impedance that is as low as possible must be ensured. As the wires are used to relieve the noise, the wire itself carries a large noise content and thus short wiring means that the wire is prevented from acting as an antenna.

Note) A long conductor will become a more efficient antenna at high frequency.

(b) The earth wire led from the earthing point must be twisted with the power supply wires. By twisting with the earthing wire, noise flowing from the power supply wires can be relieved to the earthing. However, if a filter is installed on the power supply wires, the wires and the earthing wire may not need to be twisted.

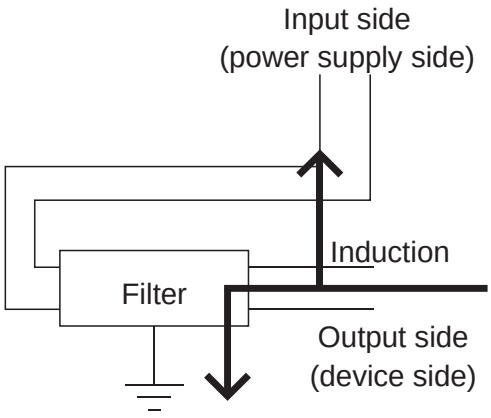
5.1.3 Noise filter (power supply line filter)

The noise filter (power supply line filter) is a device effective to reduce conducted noise. Except some models, installation of a noise filter onto the power supply lines is not necessary. However conducted noise can be reduced if it is installed. (The noise filter is generally effective for reducing conducted noise in the band of 10MHz or less.) Usage of the following filters is recommended.

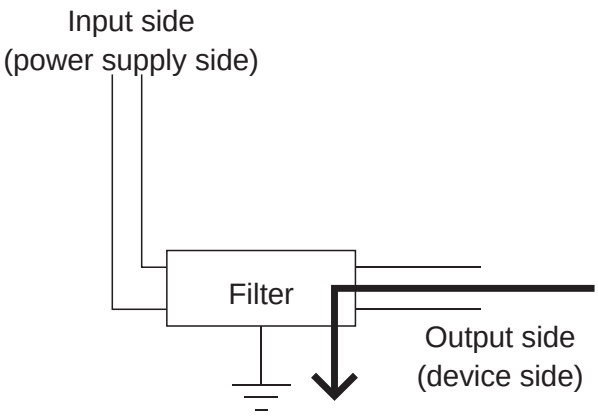
Model name	FN343-3/01	FN660-6/06	ZHC2203-11
Manufacturer	SCHAFFNER	SCHAFFNER	TDK
Rated current	3A	6A	3A
Rated voltage	250V		

The precautions required when installing a noise filter are described below.

(1) Do not install the input and output cables of the noise filter together to prevent the output side noise will be inducted into the input side cable where noise has been eliminated by the noise filer.



(a) Installing the input and output cables together will cause noise induction.



(b) Separate the input cable from the output cable.

(2) Connect the noise filter's ground terminal to the control panel with the shortest cable as possible (approx. 10cm (3.94 in.) or less).

5.2 Requirements for Conpliance with the Low Voltage Directive

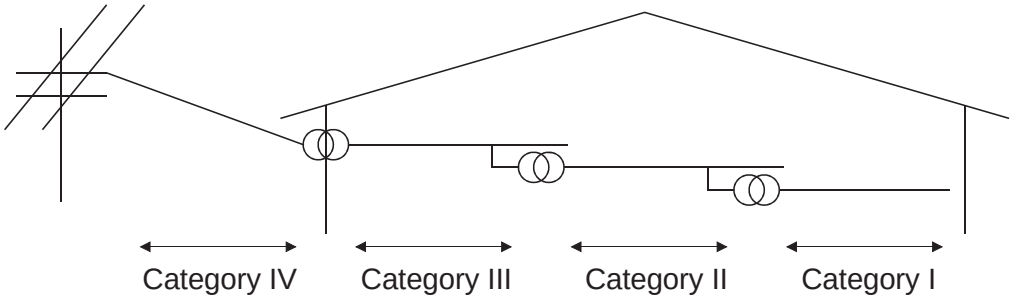
The Low Voltage Directive requires each device which operates with power supply ranging from 50VAC to 1000V and 75VDC to 1500V to satisfy necessary safety items.
In the Sections from 5.2.1 to 5.2.5, cautions on installation and wiring of the GOT to conform to the Low Voltage Directive requires are described.
We have put the maximum effort to develop this material based on the requirements and standards of the Directive that we have collected.
However, compatibility of the devices which are fabricated according to the contents of this manual to the above Directive is not guaranteed. Each manufacturer who fabricates such device should make the final judgement about the application method of the Low Voltage Directive and the product compatibility.

5.2.1 Standard subject to GOT

Standard applied to GOT:	EN61131-2 Programmable controllers - Equipment requirements and tests
	EN60950-1 Safety of Information Technology Equipment

5.2.2 Power supply

The insulation specification of the GOT was designed assuming installation category II. Be sure to use the installation category II power supply to the GOT.
The installation category indicates the durability level against surge voltage generated by lightning strike. Category I has the lowest durability; category IV has the highest durability.



Installation Category

Category II indicates a power supply whose voltage has been reduced by two or more levels of isolating transformers from the public power distribution.

5.2.3 Control panel

Because the GOT is open type equipment (device designed to be stored within another device), be sure to use it only when installed in a control panel.

(1) Shock protection
In order to prevent those who are unfamiliar with power facility, e.g., an operator, from getting a shock, make sure to take the following measures on the control panel.

(a) Store the GOT within the control panel locked, and allow only those who are familiar with power facility to unlock the panel.

(b) Build the structure in order that the power supply will be shut off when the control panel is opened.

(2) Dustproof and waterproof features
The control panel also provides protection from dust, water and other substances. Insufficient ingression protection may lower the insulation withstand voltage, resulting in insulation destruction. The insulation in the GOT is designed to cope with the pollution level 2, so use in an environment with pollustion level 2 or better.

Pollution level1 :	An environment where the air is dry and conductive dust does not exist.
Pollution level2 :	An environment where conductive dust does not usually exist, but occasional temporary conductivity occurs due to the accumulated dust. Generally, this is the level for inside the control panel equivalent a control room or on the floor of a typical factory.
Pollution level3 :	An environment where conductive dust exits and conductivity may be generated due to the accumulated dust. An environment for a typical factory floor.
Pollution level4 :	Continuous conductivity may occur due to rain, snow, etc. An outdoor environment.

5.2.4 Grounding

The following are applicable ground terminals.Use them in the grounded state.
Be sure to ground the GOT for ensuring the safety and complying with the EMC Directive.

Protective grounding ⏚: Ensures the safety of the GOT and improves the noise resistance.

Functional grounding ⏚: Improves the noise resistance.

5.2.5 External wiring

(1) External devices
When a device with a hazardous voltage circuit is externally connected to the GOT, select a model which complies with the Low Voltage Directive's requirements for isolation between the primary and secondary circuits.

(2) Insulation requirements
Dielectric withstand voltages are shown in the following table.

Reinforced Insulation Withstand Voltage
(Installation Category II, source : IEC664)

Rated voltage of hazardous voltage area	Surge withstand voltage (1.2/50μs)
150 VAC or below	2500V
300 VAC or below	4000V

5.3 EMC Directive-Compliant System Configuration

The information of the EMC Directive-compliant models is obtained from the information site for Mitsubishi industrial automation products MELFANSweb homepage (MELFANSweb website: http://wwwf2.mitsubishielectric.co.jp/english/index.html).

5.3.1 GOT

Use any of the following GOTs with which CE mark logo is printed on the rating plate.
For how to confirm the hardware version of a GOT, refer to the following.
☞ Appendix 2 Confirming of Versions and Conformed Standards
When using a GOT other than shown below, the system does not conform to the EMC Directive.

Item	Model	Hardware version of the GOT (Production year and month)
GT1595	GT1595-XTBA	Version B or later (Jan., 2006)
	GT1595-XTBD	Version B or later (Jun., 2006)
GT1585	GT1585V-STBA	Version K or later (Feb., 2007)
	GT1585V-STBD	Version G or later (Feb., 2007)
	GT1585-STBA	Version C or later (Apr., 2005)
	GT1585-STBD	Version B or later (Jan., 2006)
GT157□	GT1575V-STBA	Version J or later (Feb., 2007)
	GT1575V-STBD	Version G or later (Feb., 2007)
	GT1575-STBA	Version C or later (May, 2005)
	GT1575-STBD	Version B or later (Jan., 2006)
	GT1575-VTBA	Version E or later (May, 2005)
	GT1575-VTBD	Version B or later (Jan., 2006)
	GT1575-VNBA	Version K or later (Jan., 2006)
	GT1575-VNBD	Version B or later (Mar., 2006)
	GT1572-VNBA	Version K or later (Jan., 2006)
	GT1572-VNBD	Version B or later (Jan., 2006)
GT156□	GT1565-VTBA	Version E or later (Apr., 2005)
	GT1565-VTBD	Version B or later (Nov., 2005)
	GT1562-VNBA	Version J or later (Nov., 2005)
	GT1562-VNBD	Version B or later (Mar., 2006)
GT155□	GT1555-VTBD	Version E or later (Aug., 2007)
	GT1555-QTBD	Version F or later (Dec., 2006)
	GT1555-QSBD	Version F or later (Dec., 2006)
	GT1550-QLBD	Version F or later (Dec., 2006)

5.3.2 Connection method

Use the following methods to connect with the GOT to ensure compliance with the EMC Directive.

○ : Compliant with EMC Directive × : Not compliant with EMC Directive

Connection method	GT15
Bus connection	○
Direct connection to CPU	○
Computer link connection	○
MELSECNET/H connection (PLC to PLC network) MELSECNET/10 connection (PLC to PLC network)	○
CC-Link IE controller network connection	○
CC-Link connection (intelligent device station)	○
CC-Link connection (via G4)	×
Ethernet connection	○
Other connections	○*2

*1: For details about each connection method, refer to the GOT1000 Series Connection Manual.

*2: When connecting the GOT to other controllers as a PLC manufactured by other company, create the cable (by the user) and configure the system to meet the EMC Directive specifications for the connected device.

(☞ 5.4.2 (8)PLC (manufactured by other company), microcomputer, temperature controller, inverter, servo amplifier or CNC connection)

Point

Connected devices

If connecting to the PLC or microcomputer other than Mitsubishi products (MELSEC-Q series, MELSEC-QnA series or MELSEC-A series) please refer to the EMC Directive compliance manual for that specific device.

5.3.3 When the communication unit is used

Use the following communication unit with the GOT to ensure compliance with the EMC Directive. The GOT does not comply with the EMC Directive when connected with other than followings.

Connection method	Communication unit used	Hardware version of the communication unit (Production year and month)
Bus connection	GT15-QBUS	Version D or later (Oct., 2005)
	GT15-QBUS2 GT15-ABUS GT15-ABUS2	Version C or later (Oct., 2005)
	GT15-75QBUSL GT15-75QBUS2L GT15-75ABUSL GT15-75ABUS2L	Version G or later (Mar., 2005)
Direct connection to CPU	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S	Version D or later (Jan., 2006)
Computer link connection	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S	Version D or later (Jan., 2006)
MELSECNET/H connection (PLC to PLC network) MELSECNET/10 connection (PLC to PLC network)	GT15-J71LP23-25 GT15-J71BR13	Version C or later (Sep., 2006)
CC-Link IE controller network connection	GT15-J71GP23-SX	Version A or later
CC-Link connection (Intelligent device station)	GT15-J61BT13	Version C or later (Sep., 2006)
Ethernet connection	GT15-J71E71-100	Version B or later (Mar., 2005)
Microcomputer connection	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S	Version D or later (Jan., 2006)
Third party PLC connection	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S	Version D or later (Jan., 2006)

(Continued to next page)

Connection method	Communication unit used	Hardware version of the communication unit (Production year and month)
Temperature controller	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S GT15-RS4-TE	Version D or later (Jan., 2006)
Inverter connection	GT15-RS2T4-9P	Version A or later
	GT15-RS4-9S	Version D or later (Jan., 2006)
Servo amplifier connection	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S	Version D or later (Jan., 2006)
CNC connection	GOT RS-232 interface	-
	GT15-RS2T4-9P	Version A or later
	GT15-RS2-9P GT15-RS4-9S	Version D or later (Jan., 2006)
	GT15-J71LP23-25 GT15-J71BR13 GT15-J61BT13	Version C or later (Sep., 2006)
	GT15-J71E71-100	Version B or later (Mar., 2005)

The GOT does not comply with the EMC Directive when it is used with the following unit.

Product name	Model name
MELSECNET/10 communication unit	GT15-75J71LP23-Z, GT15-75J71BR13-Z
CC-Link communication unit	G15-75J61BT13-Z

5.3.4 When the option unit is used

The following shows EMC Directive compliance of option units.
○ : Compliant with EMC Directive × : Not compliant with EMC Directive

Product name	Model name	EMC Directive	Hardware version (Production year and month)
Printer unit*	GT15-PRN	○	Version B or later (Feb.,2006)
Video input unit	GT15V-75V4R1	○	Version D or later (Feb.,2007)
RGB input unit	GT15V-75V4	○	Version D or later (Feb.,2007)
Video/RGB input unit	GT15V-75R1	○	Version D or later (Feb.,2007)
RGB output unit	GT15V-75ROUT	○	Version C or later (Feb.,2007)
CF card unit	GT15-CFCD	○	Version C or later (Jul.,2007)
CF card extension unit	GT15-CFEX-C08SET	○	Version B or later (Jul.,2007)
External I/O unit	GT15-DIO	○	Version B or later (May,2007)
Sound output unit	GT15-SOUT	○	Version B or later (May,2007)

*: For the printer to be connected, configure the system in accordance with the EMC Directive specifications for the printer as requested by the printer manufacturer.

5.3.5 When the option is used

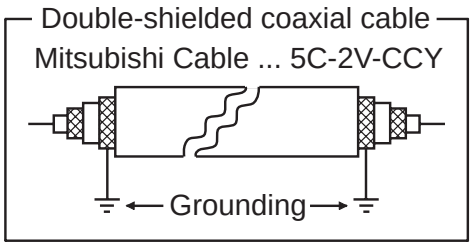
The following shows EMC Directive compliance of option.
○ : Compliant with EMC Directive × : Not compliant with EMC Directive

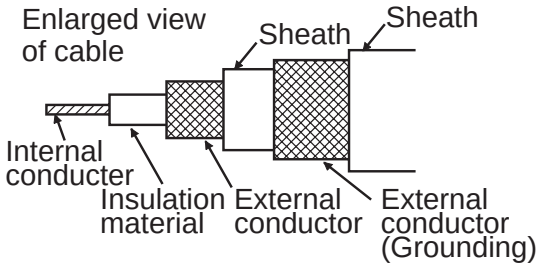
Product name	Model name	EMC Directive	Hardware version (Production year and month)
Option function board	GT15-FNB	○	Version A or later (Mar.,2005)
	GT15-QFNB		
Option function board with add-on memory	GT15-QFNB16M		
	GT15-QFNB32M		
	GT15-QFNB48M		
	GT15-MESB48M	○	Version C or later (Jun.,2006)

5.3.6 Cables

(1) Cables used

(a) For the MELSECNET/H connection (coaxial cable), MELSECNET/10 connection (coaxial cable), and video connection, use double shield coaxial cables.
The 5C-2V connector plug is applicable to double-shielded coaxial cable.
Connect the 5C-2V connector plug to the coaxial cable inside a double-shielded coaxial cable.
Ground the shielded part outside a double-shielded coaxial cable as shown in the following figure.





(b) For details of the cables used for conncetions other than the above, refer to the GOT1000 Series Connection Manual.

(2) Adjusting a cable for the EMC Directive compliance
Modify the cables (including user-produced cable) to ensure compliance with the EMC Directive.
For details, refer to Section 5.4.2.

5.4 Precautions for Wiring/Connecting the EMC Directive-Compliant Product

Wire and connect GOT1000 series equipments as instructed below. If the GOT1000 series equipments are configured in a way different from the following instructions, the system may not comply with EMC directives.

5.4.1 Power and ground wires wiring method

(1) Power and ground wires wiring method

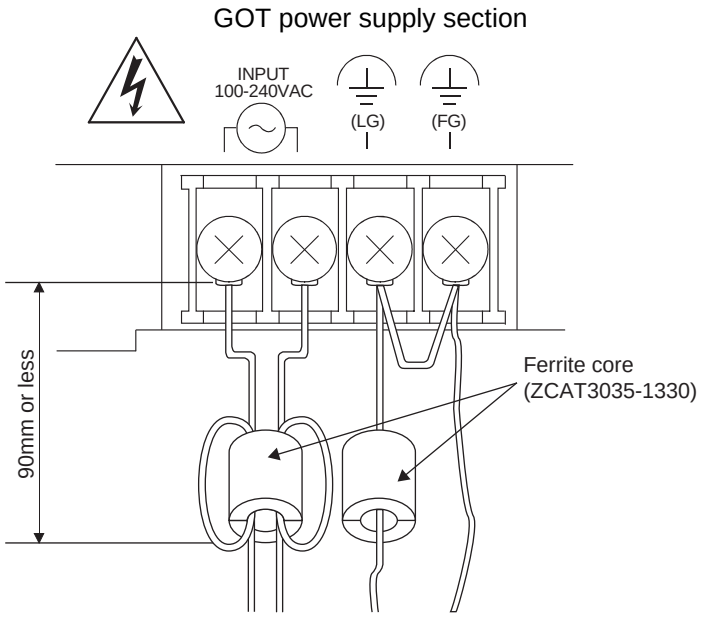
Connect the power wire and connection cable as shown in the illustration, and be sure to attach a ferrite core (TDK Corporation type ZCAT3035-1330) within the range shown below. (Ferrite cores are not required for GT155□.)

Lead the power wire and ground wire as shown in Section 5.1.2 (2).

Be sure to ground the LG cable, FG cable, and protective ground cable.

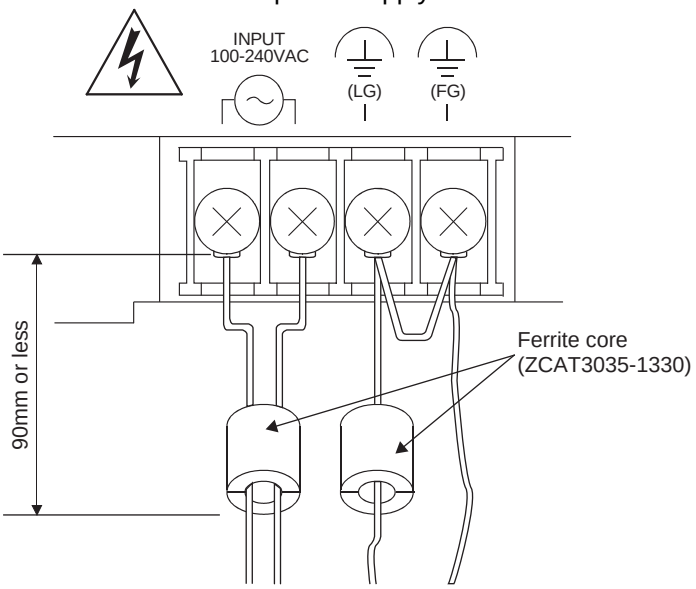
(a) 100-240VAC GOT power section

• Video/RGB connection



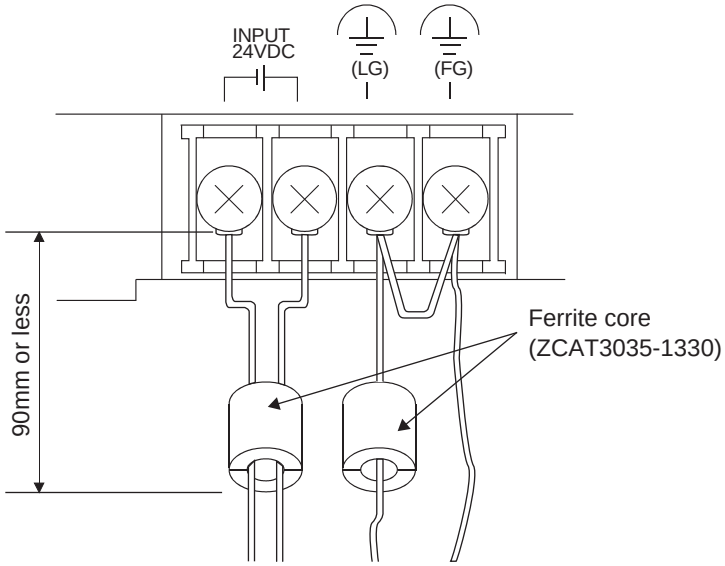
• Connections other than above

GOT power supply section

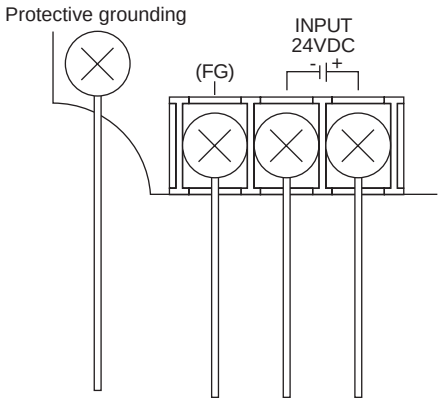


(b) 24VDC GOT power section

• GT1595, GT1585, GT157□, and GT156□

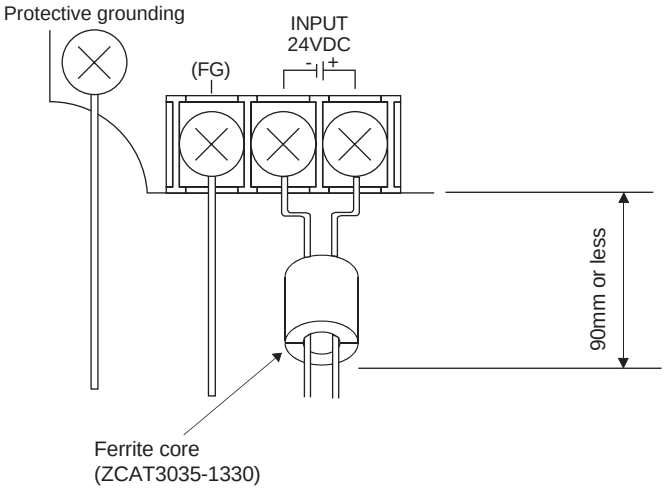


• GT155□



* Be sure to ground the protective ground terminal and the FG terminal respectively.

• When CC-Link IE controller network communication unit is mounted on GT155 □



5.4.2 Processing connection cables

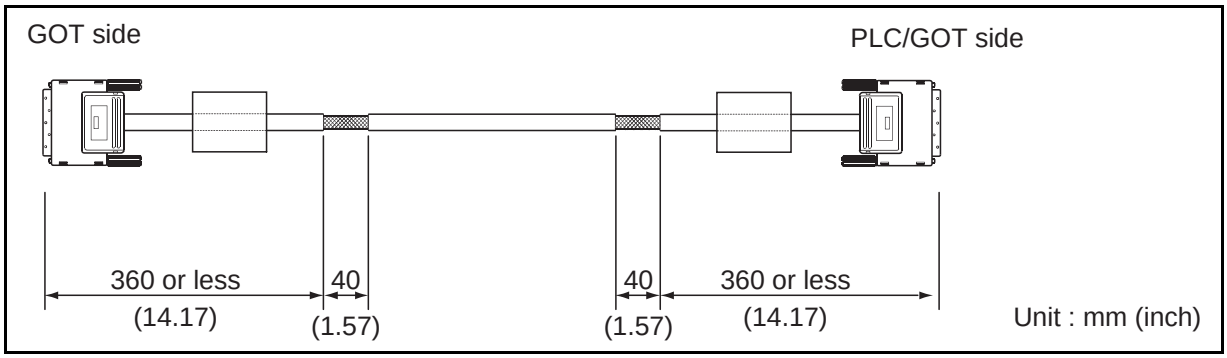
Process the cable used with the GOT with the following method.
When processing the cable, ferrite core, cable clamp and shielding material are required.
The cable clamp used by Mitsubishi Electric for the EMC specification compatibility test is shown below.

- TDK corporation brand ZCAT3035-1330 Ferrite Core
- Mitsubishi Electric Model AD75CK cable clamp
- Japan Zipper Tubing Co., Ltd. Zipper tube SHNJ type

(1) BUS connection cable

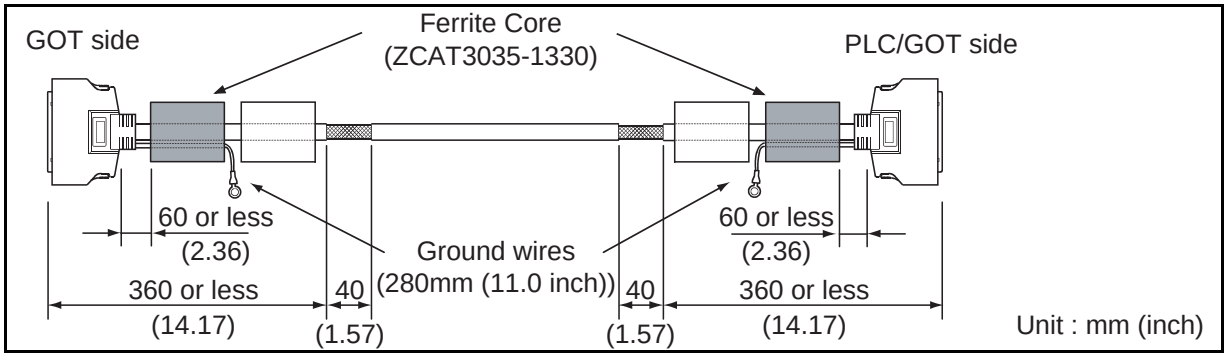
(a) For GT15-QC□B, GT15-QC□BS

- Peel the sheath (with the length shown below) at both ends of the cable, and expose the shield braided wire for grounding. (For grounding with cable clamps. (refer to Section 5.4.3.))



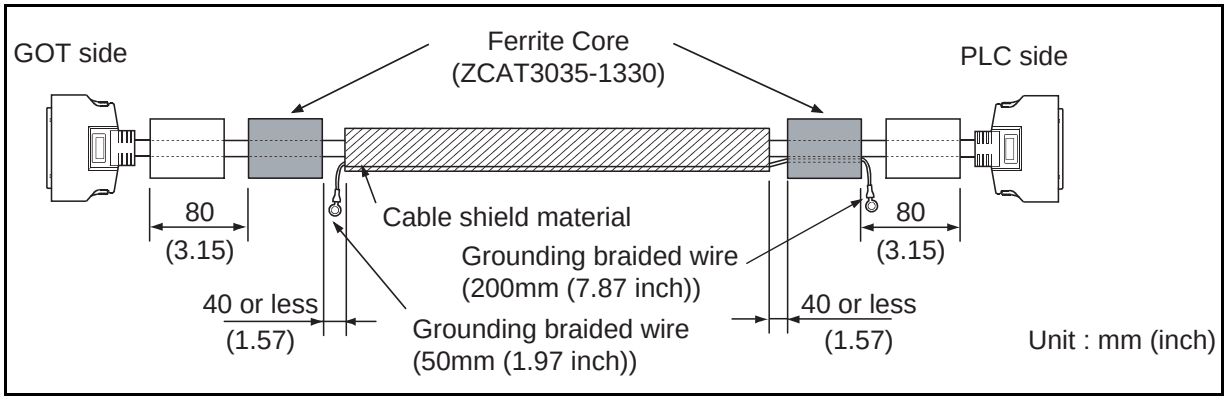
(b) For GT15-C□BS

- Cut the connection wire protruding from both ends of the cable to the lengths shown below.
- Attach the ferrite core to the cable in the position as illustrated below and insert the ground wire into the ferrite core.
- Peel the sheath (with the length shown below) at both ends of the cable, and expose the shield braided wire for grounding. (For grounding with cable clamps. (refer to Section 5.4.3.))



(c) For other bus connection cables

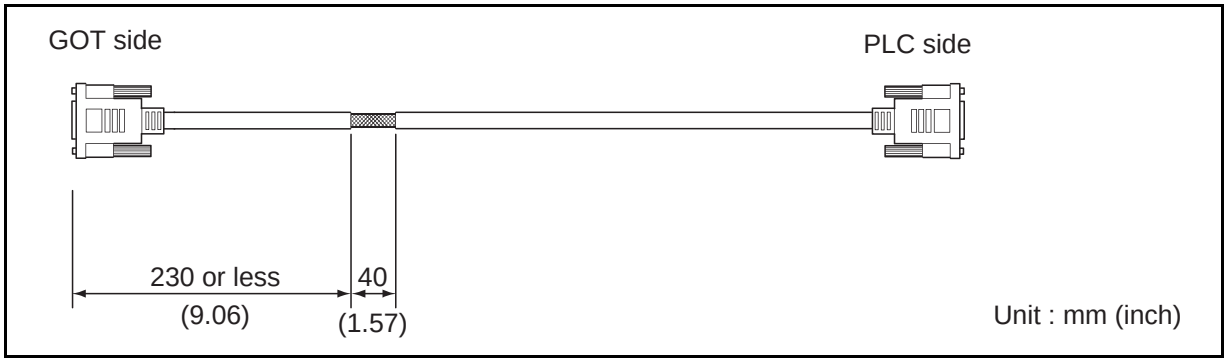
- Wind cable shield material around the cable, and pull out the grounding braided wire of the cable shield material with the length shown below.
- Attach the ferrite core to the cable in the position as illustrated below and insert the braided wire for grounding into the ferrite core.



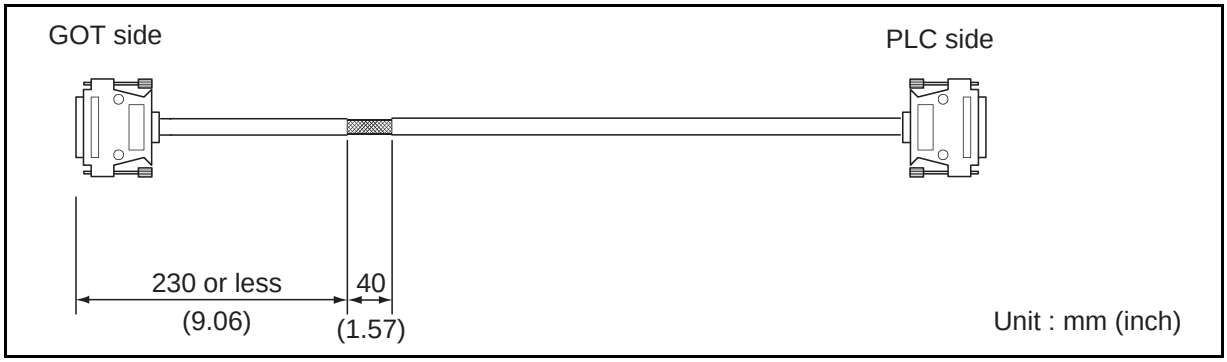
(2) CPU direct connection and computer link connection

- Peel the sheath (with the length shown below) of the cable to expose the shield braided wire for grounding. (For grounding with cable clamps (refer to Section 5.4.3))

(a) For RS-232 cable



(b) RS-422 cable (For AC30/100/300R4-25P)

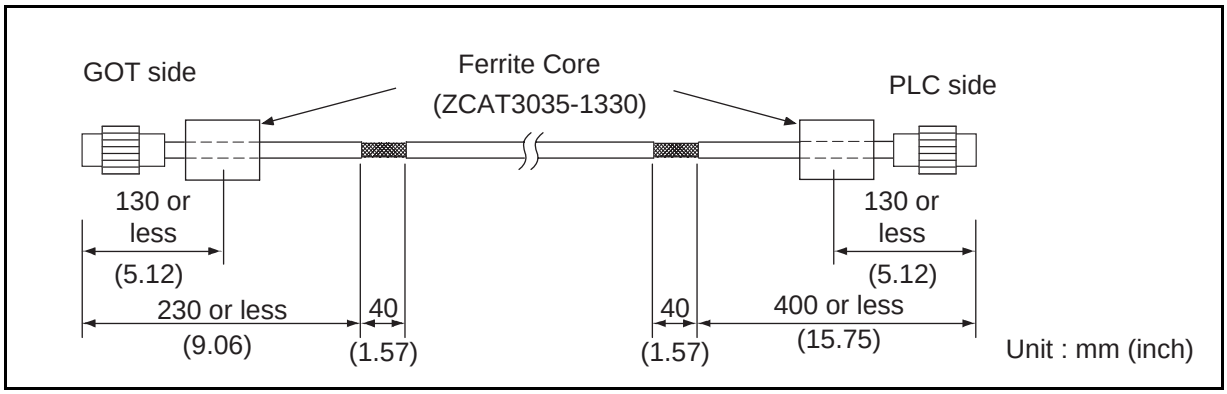


(3) MELSECNET/H connection (PLC to PLC network) and MELSECNET/10 connction (PLC to PLC network)

(a) For coaxial cable

• Strip the outer insulation layer at both ends of the cable by the length shown below to expose the outer braided shield for grounding. (For grounding with cable clamps (refer to Section 5.4.3.))

• Attach ferrite cores to the cable in the positions as illustrated below.



(b) For optical fiber cable

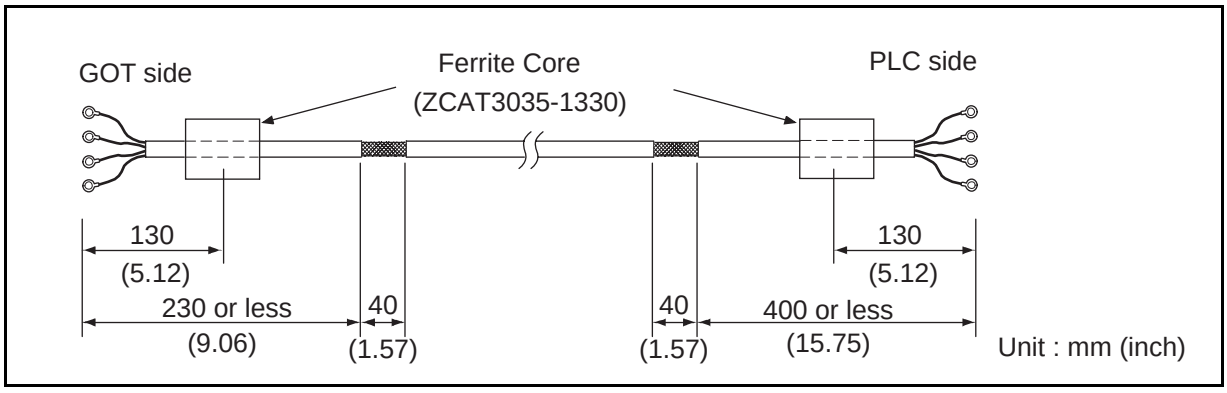
• Processing of the cable is not required.

(4) CC-Link connection (Intelligent device station)

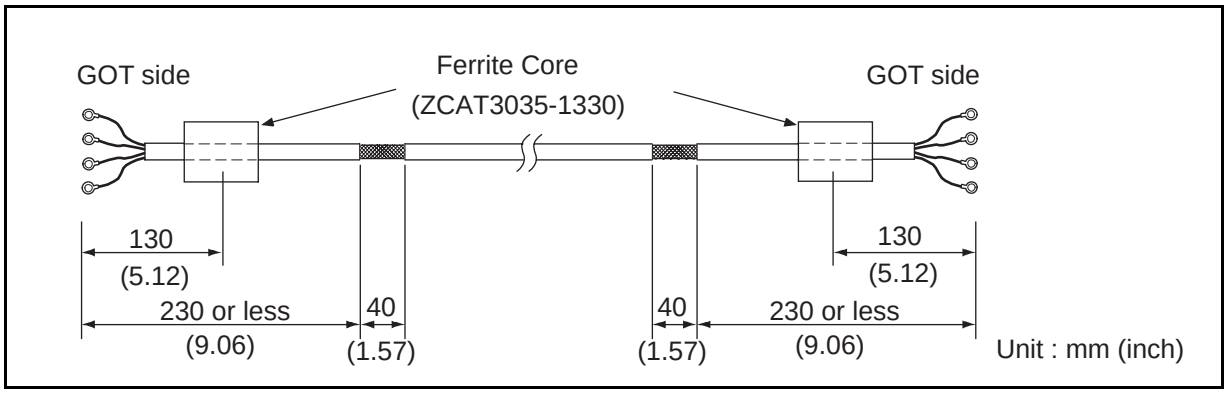
Strip the outer insulation layer at both ends of the cable by the length shown below to expose the braided shield for grounding. (For grounding with cable clamps (refer to Section 4.4.3.))

• Attach ferrite cores to the cable in the positions as illustrated below.

• CC-Link dedicated cable for connecting the GOT and PLC.

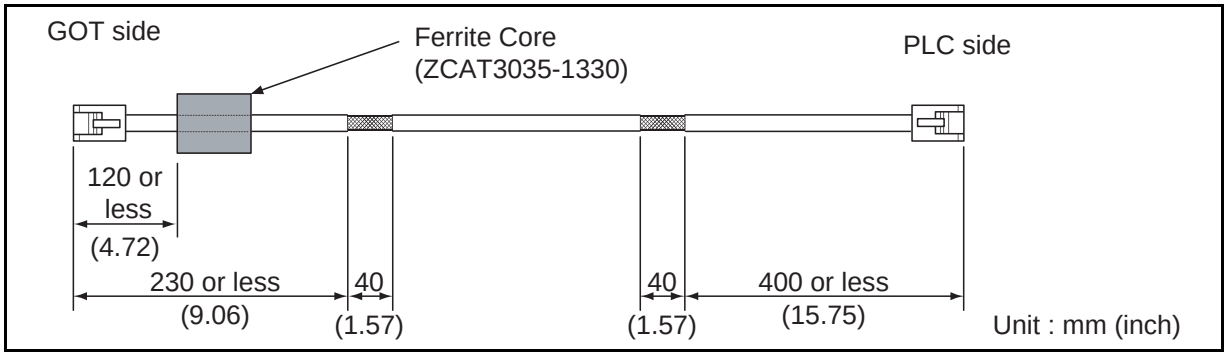


• CC-Link dedicated cable for connecting the GOT and GOT



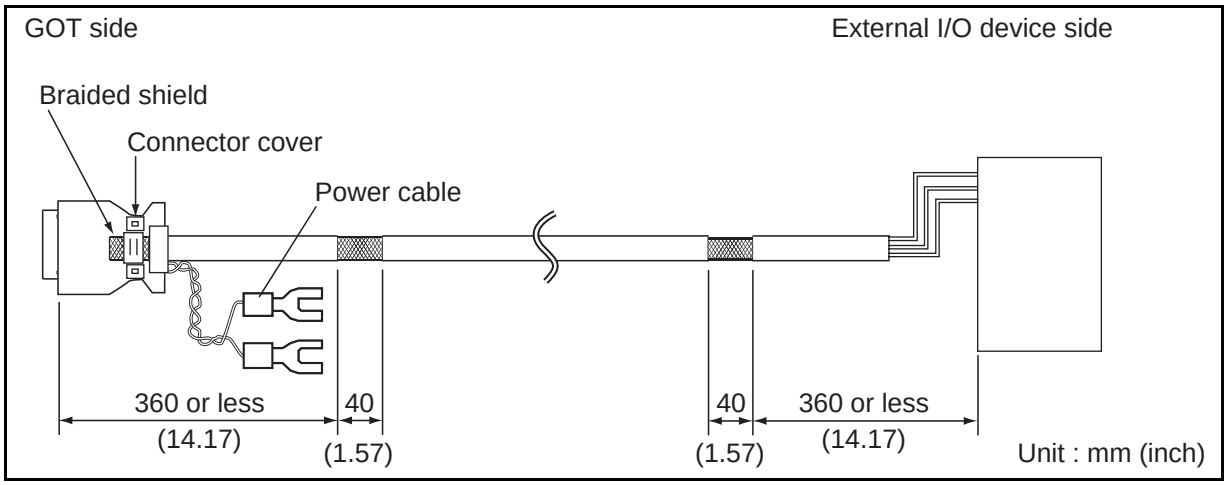
(5) Ethernet connection

- Strip the outer insulation layer at both ends of the cable by the length shown below to expose the braided shield for grounding. (For grounding with cable clamps. (refer to Section 5.4.3.))
- Attach the ferrite core to the cable in the position as illustrated below.



(6) External I/O device connection

- Strip the outer insulation layer at both ends of the cable by the length shown below to expose the braided shield for grounding.(For grounding with cable clamps (Refer to Section 5.4.3.))
- Connect the braided shield to the connector with the connector cover.
- Twist power cables.

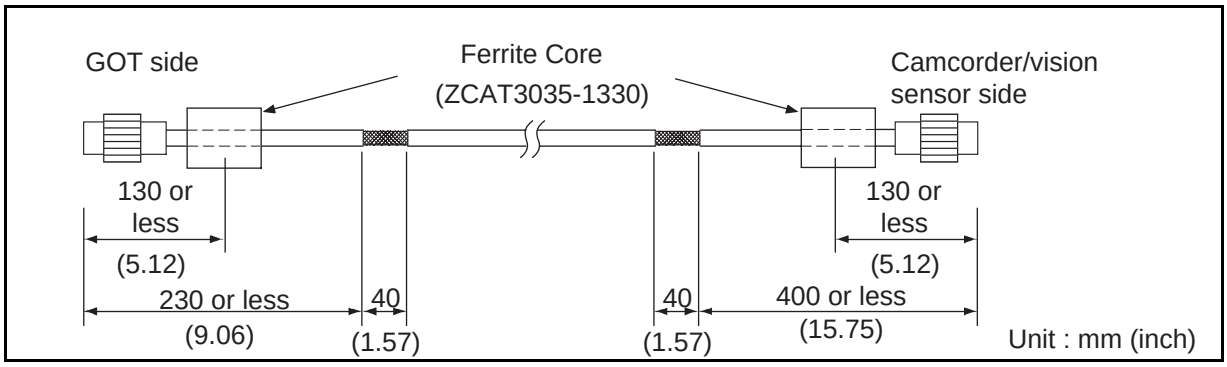


(7) Video/RGB connection

(a) Video input

• Peel the sheath (with the length shown below) at both ends of the cable, and expose the shield braided wire for grounding. (For grounding with cable clamps. (refer to Section 5.4.3.))

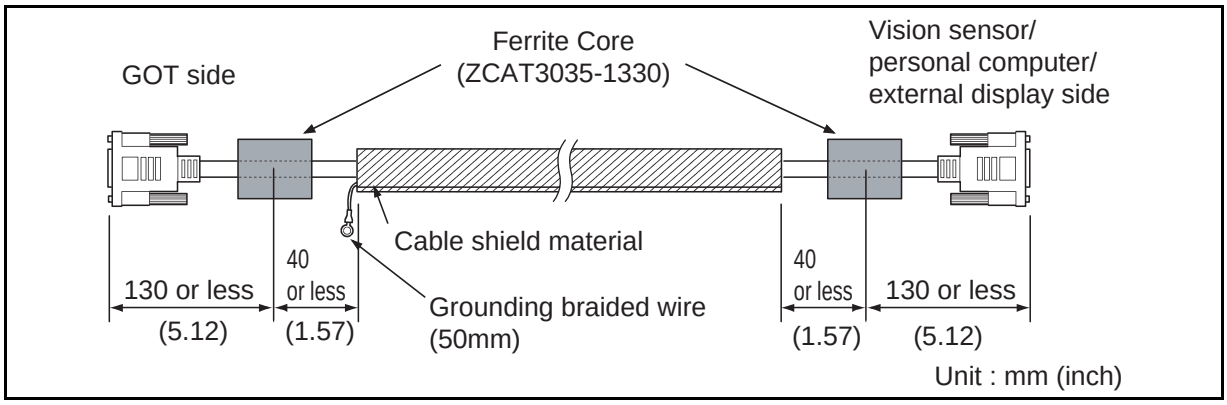
• Attach the ferrite core to the cable in the position as illustrated below.



(b) RGB input/output

• Wind cable shield material around the cable, and pull out the grounding braided wire of the cable shield material with the length shown below.

• Attach the ferrite core to the cable in the position as illustrated below.



(8) PLC (manufactured by other company), microcomputer, temperature controller, inverter, servo amplifier or CNC connection

Produce the cable (RS-232 cable, RS-422 / 485 cable) for connecting the GOT to a controller with reference to the GOT1000 Series Connection Manual.

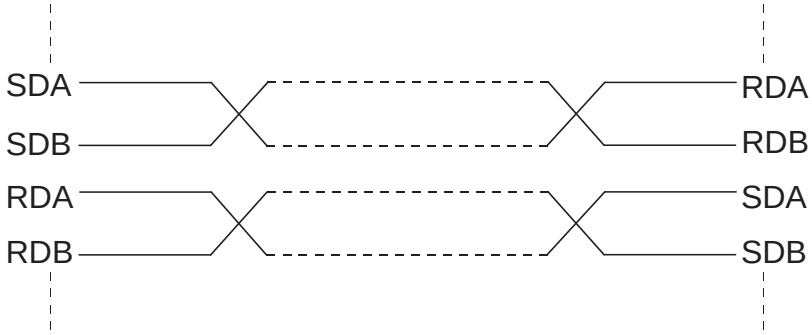
Point

Configure the system to meet the EMC Directive specifications for the connected device when connecting the GOT to a controller.

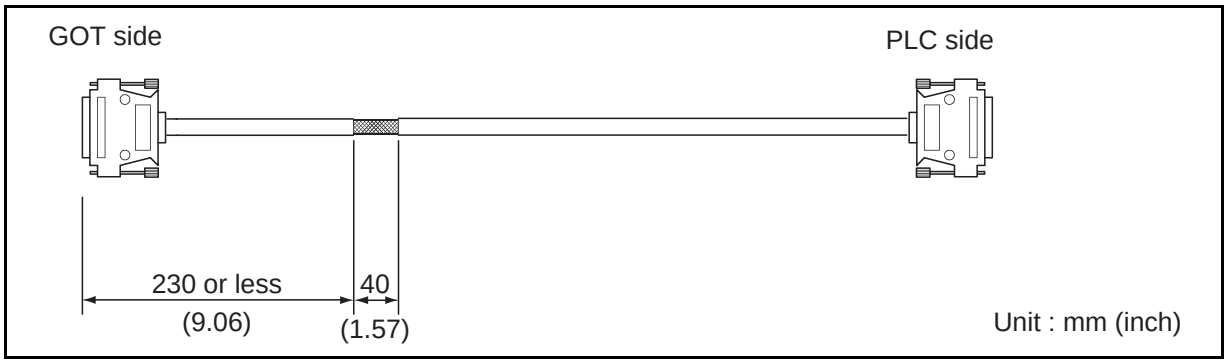
The following gives the instructions to ensure the machinery comply with the EMC Directive. However, the manufacturer of the machinery must finally determine how to make it comply with the EMC Directives: if it is actually compliant with the EMC Directives.

(a) For RS-422 / 485 cable

- Each signal wire (excluding SG and FG) should be made into a two power wires and connected, then twisted.

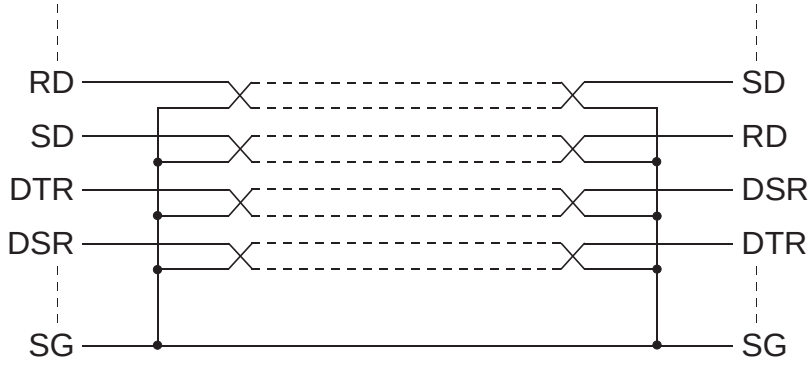


- Make the SG wire more than two wires and connect.
- Peel the sheath (with the length shown below) of the created cable to expose the shield braided wire for grounding. (For grounding with cable clamps (refer to Section 5.4.3))

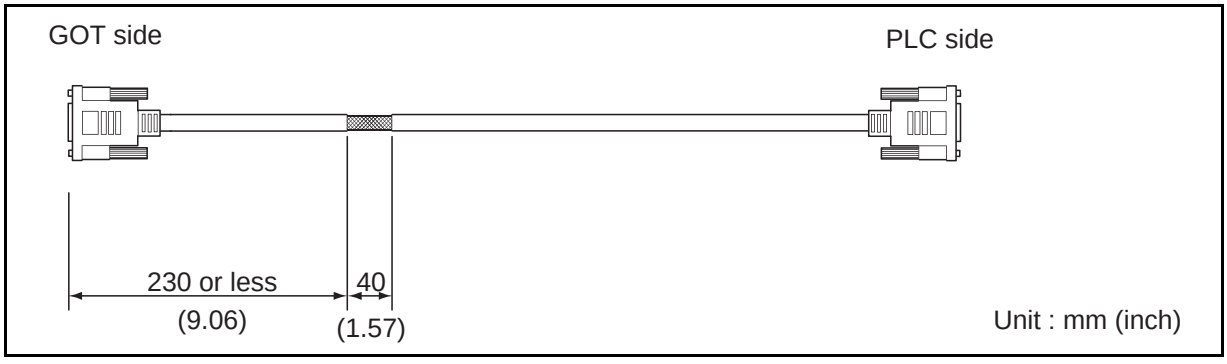


(b) For RS-232 cable

- Use a twisted pair style for each signal wire (except SG, FG) with SG.



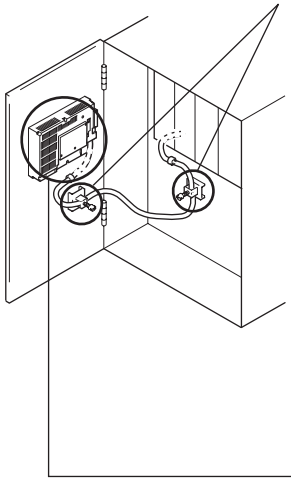
- Peel the sheath (with the length shown below) of the created cable to expose the shield braided wire for grounding. (For grounding with cable clamps (refer to Section 5.4.3))

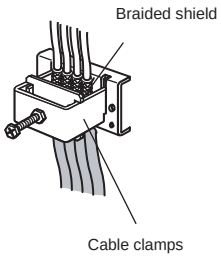


5.4.3 Grounding the cable

Ground the cable and grounding wire to the control panel where the GOT and base unit are installed.

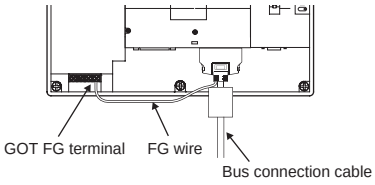
1) Ground the braided shield portion of the cable to the control panel with the cable clamp (AD75CK).





For the cable clamp attaching details, refer to AD75CK-type Cable Clamping Instruction Manual <IB-68682>.

a) For GT15-C EXSS-1 and GT15-C BS
Ground the ground wire to the FG terminal of the GOT power supply section.



b) For other bus connection cables
Ground the braided wire for grounding to the control panel by tightening a screw.

6. INSTALLATION

⚠CAUTION

- Use the GOT in the environment that satisfies the general specifications described in this manual. Do not expose the GOT to dust, lamp soot, conductive dust, corrosive gas, or combustible gas; high-temperature, condensing, wind or rain; or to vibrations and impact.
  Failure to do so can cause an electric shock, fire, malfunction or product damage or deterioration.
- Do not drop chips or wire scraps near the ventilation window of the GOT when processing screw holes or wiring.
  Failure to do so can cause a fire, failure or malfunction.
- Tighten the mounting screws within the specified torque range.
  Undertightening can cause the GOT to drop, short circuit or malfunction.
  Overtightening can cause a drop, short-circuit or malfunction due to the damage of the screws or the unit.
- Make sure to install the connection cable to the connector specified during the power OFF.
  Failure to do so may cause a malfunction due to the poor contact.

6.1 Control Panel Inside Dimensions for Mounting GOT

Install the GOT and the CF card extension unit on the control panel out of the way for the equipment inside the control panel. Do not install the GOT and the unit in prohibited areas for the installation.

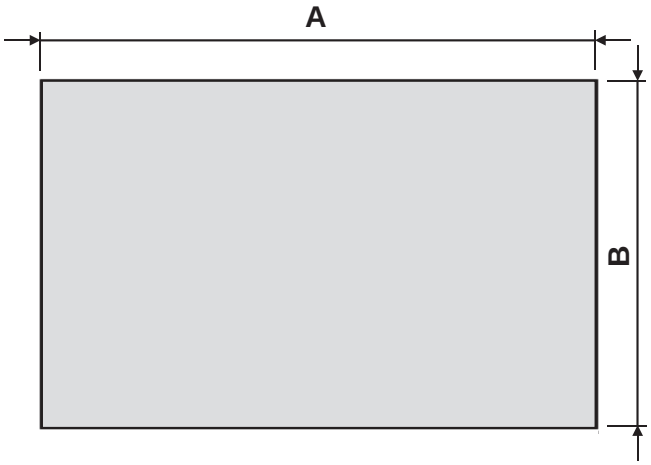
Point

Applicable cable

Some cables may need to be longer than the specified dimensions when connecting to the GOT.
Therefore, consider the connector dimensions and bending radius of the cable as well for installation.

6.2 Panel Cutting Dimensions

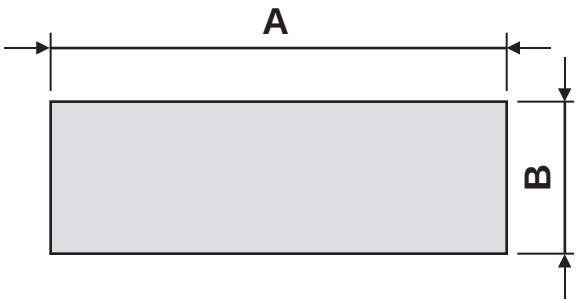
(1) Panel cutting dimensions when installing GOT
Make a installation hole on the control panel with the dimensions shown below.
Make space of 10mm above and below the hole respectively for the installation fittings.



* Panel thickness: 2 to 4 mm or less

GOT	A [mm] (inch)	B [mm] (inch)
GT1595	383.5(15.1) (+2(0.08), 0(0))	282.5(11.12) (+2(0.08), 0(0))
GT1585	302(11.89) (+2(0.08), 0(0))	228(8.98) (+2(0.08), 0(0))
GT157☐	289(11.38) (+2(0.08), 0(0))	200(7.87) (+2(0.08), 0(0))
GT156☐	227(8.94) (+2(0.08), 0(0))	176(6.93) (+2(0.08), 0(0))
GT155☐	153(6.02) (+2(0.08),0(0))	121(5) (+2(0.08),0(0))

(2) Panel cutting dimensions when installing CF card extension unit
Make a installation hole on the control panel with the dimensions shown below.
Make space of 10mm on the left and right of the hole respectively for the installation fittings.



* Panel thickness: 2 to 4 mm or less

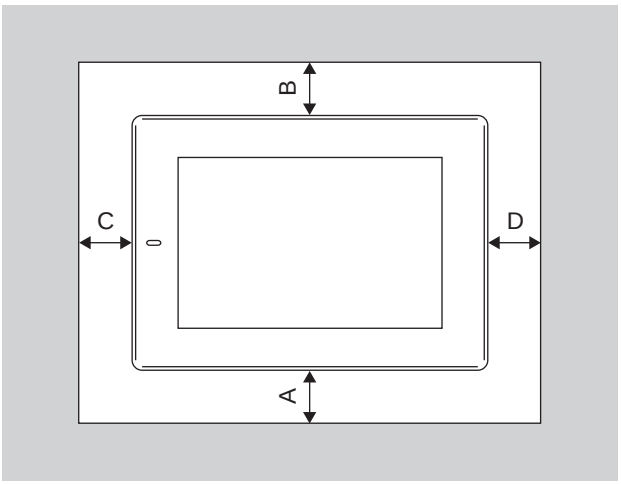
GOT	A [mm] (inch)	B [mm] (inch)
GT15-CFEX-C08SET	94(3.7) (+2(0.08), 0(0))	33(1.3) (+2(0.08), 0 (0))

6.3 Mounting Position

1 For installing GOT

When mounting the GOT, the following clearances must be left from the other device.
Some cables may need to be longer than the specified dimensions when connecting to the GOT.
Therefore, consider the connector dimensions and bending radius of the cable as well for installation.
For the lead-in allowance for cables at the bottom of the GOT, refer to the following.

☞Appendix 1 External Dimensions



	Type	GT1595	GT1585	GT157□	GT156□	GT155□
A	GOT only	50(1.97) or more [20(0.79) or more]		50(1.97) or more [31(1.22) or more]	50(1.97) or more [36(1.47) or more]	65(2.26) or more
	Bus connection unit is fitted	50(1.97) or more [20(0.79) or more]		50(1.97) or more [31(1.22) or more]	50(1.97) or more [36(1.47) or more]	65(2.26) or more
	Serial communication unit fitted	50(1.97) or more [20(0.79) or more]		50(1.97) or more [31(1.22) or more]	50(1.97) or more [36(1.47) or more]	65(2.26) or more
	RS-422 Conversion unit is fitted	50(1.97) or more	51(2.01) or more	68(2.68) or more	73(2.87) or more	—
	Ethernet communication unit is fitted	50 (1.97) or more [20 (0.79) or more]				50 (1.97) or more [40 (1.58) or more]
	MELSECNET/10 communication unit (coaxial) is fitted	50 (1.97) or more [20 (0.79) or more]				—
	CC-Link communication unit (GT15-75J61BT13-Z) fitted	50 (1.97) or more [20 (0.79) or more]				—
	CC-Link communication unit (GT15-J61BT13) fitted	50 (1.97) or more [20 (0.79) or more]				50(1.97) or more [32(1.26) or more]
	MELSECNET/10 communication unit (optical) fitted	50(1.97) or more [20(0.79) or more]	50(1.97) or more [26(1.02) or more]	50(1.97) or more [43(1.69) or more]	50(1.97) or more [48(1.89) or more]	—
	MELSECNET/H communication unit (coaxial) fitted	50(1.97) or more [20(0.79) or more]	50(1.97) or more [24(0.95) or more]	50(1.97) or more [38(1.5) or more]	50(1.97) or more	72(2.84) or more
	MELSECNET/H communication unit (optical) fitted	50 (1.97) or more [20 (0.79) or more]				
	CC-Link IE controller network communication unit fitted	50 (1.97) or more [20 (0.79) or more]				
	Printer unit fitted	50(1.97) or more [20(0.79) or more]		50(1.97) or more [31(1.22) or more]	50(1.97) or more [36(1.47) or more]	50(1.97) or more
	Video input unit fitted	—	50 (1.97) or more [20 (0.79) or more]		—	—

(Continued to next page)

Type		GT1595	GT1585	GT157□	GT156□	GT155□
A	RGB input unit fitted	—	50 (1.97) or more [20 (0.79) or more]		—	—
	Video/RGB input unit fitted	—	50 (1.97) or more [20 (0.79) or more]		—	—
	RGB output unit fitted	—	50 (1.97) or more [20 (0.79) or more]		—	—
	CF card unit	50 (1.97) or more [20 (0.79) or more]		50 (1.97) or more [31 (1.22) or more]	50 (1.97) or more [36 (1.47) or more]	65 (2.26) or more
	CF card extension unit	50 (1.97) or more [20 (0.79) or more]		50 (1.97) or more [31 (1.22) or more]	50 (1.97) or more [36 (1.47) or more]	65 (2.26) or more
	External I/O unit	50(1.97) or more [20(0.79) or more]		50(1.97) or more [31(1.22) or more]	50(1.97) or more [36(1.47) or more]	65(2.26) or more
	Sound output unit					
B		80(3.15) or more [20(0.79) or more]				
C	(When the CF card is not used)	50(1.97) or more [20(0.79) or more]				
	(When the CF card is used)	50(1.97) or more [20(0.79) or more]				100(3.94) or more
D		50(19.7) or more [20(0.79) or more]				
E		100(39.4) or more [20(0.79) or more]				

Unit: mm (inch)

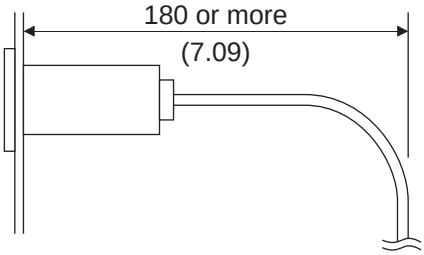
The values enclosed in parenthesis apply to the case where no other equipment generating radiated noise (such as a contactor) or heat is installed.
However, keep the ambient temperature of the GOT to 55°C or lower even in such a case.
The required lead-in allowance for cables may be larger than the size of A above depending on the unit or cable used.

2 For installing CF card extension unit

(1) Installing location

(a) Depth dimensions

When the control panel side installation unit is installed on the control panel, 180mm in depth (including the bending radius of the cable) is required inside the control panel.



Unit : mm(inch)

(b) Available area for installation

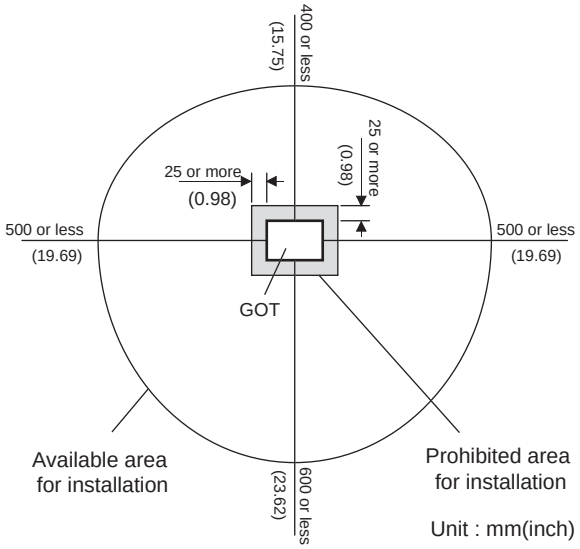
When the control panel side installation unit is installed on the control panel, a distance of 25mm is required around the unit.

Keep a distance of 25mm or more between the control panel side installation unit and the GOT.

The control panel side installation unit can be installed in the area shown in the following figure.

For the installation, do not give stresses, including an incorrect bending radius of the cable, on the connection cable.

☞Appendix 1 External Dimensions



Unit : mm(inch)

(2) Prohibited area for installation

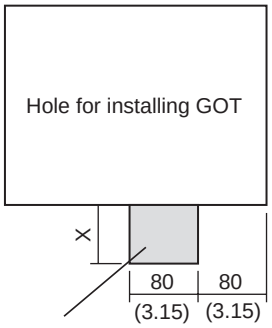
The control panel side installation unit cannot be installed within 25mm (0.98inch) from the GOT.
When the CF card extension unit is used with the other extension units, the control panel side installation unit cannot be installed in some areas because the cables of the other extension units get in the way of the control panel side installation unit.
The following shows prohibited areas for the installation.

(a) For GT1595

The control panel side installation unit cannot be installed within 25mm (0.98inch) from the GOT.
(Prohibited areas for the installation with the other extension units do not exist.)

(b) For GT1585

The control panel side installation unit cannot be installed within 25mm (0.98inch) from the GOT.
When the other extension units are used, the control panel side installation unit cannot be installed in the areas shown in the following figure.



Prohibited area for installation with an extension unit

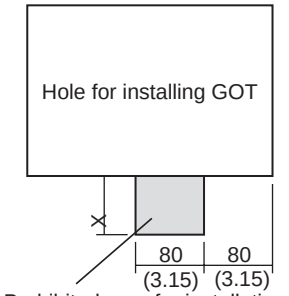
Extension unit	Model	X (Unit: mm(inch))
Bus connection unit	GT15-75ABUS2L, CGT15-75ABUSL GT15-ABUS, CGT15-ABUS2	-*
	GT15-75QBUS2L, CGT15-QBUS2 GT15-75QBUSL, CGT15-QBUS	
Serial communication unit	GT15-RS2-9P, CGT15-RS4-9S GT15-RS4-TE	
Ethernet communication unit	GT15-J71E71-100	
MELSECNET/H communication unit	GT15-J71LP23-25	68(2.68)
	GT15-J71BR13	-*
MELSECNET/10 communication unit	GT15-75J71LP23-Z	68(2.68)
	GT15-75J71BR13-Z	-*
CC-Link IE controller network communication unit	GT15-J71GP23-SX	68(2.68)
CC-Link communication unit	GT15-J61BT13, GT15-75J61BT13-Z	-*
Printer unit	GT15-PRN	
Video input unit	GT15V-75V4	68(2.68)
RGB input unit	GT15V-75R1	-*
Video/RGB input unit	GT15V-75V4R1	68(2.68)
RGB output unit	GT15V-75ROUT	-*

* Prohibited areas for installing the control panel side installation unit with the extension unit do not exist.

(c) For GT157□

The control panel side installation unit cannot be installed within 25mm (0.98inch) from the GOT.

When the other extension units are used, the control panel side installation unit cannot be installed in the areas shown in the following figure.



Prohibited area for installation with an extension unit

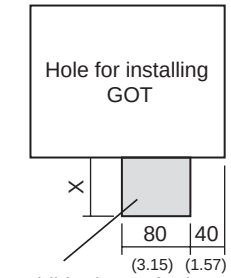
Extension unit	Model	X (Unit: mm(inch))
Bus connection unit	GT15-75ABUS2L, GT15-75ABUSL GT15-ABUS, GT15-ABUS2	-*
	GT15-75QBUS2L, GT15-QBUS2 GT15-75QBUSL, GT15-QBUS	
Serial communication unit	GT15-RS2-9P, GT15-RS4-9S GT15-RS4-TE	
Ethernet communication unit	GT15-J71E71-100	
MELSECNET/H communication unit	GT15-J71LP23-25	85(3.35)
	GT15-J71BR13	-*
MELSECNET/10 communication unit	GT15-75J71LP23-Z	85(3.35)
	GT15-75J71BR13-Z	-*
CC-Link IE controller network communication unit	GT15-J71GP23-SX	85(3.35)
CC-Link communication unit	GT15-J61BT13, GT15-75J61BT13-Z	-*
Printer unit	GT15-PRN	
Video input unit	GT15V-75V4	85(3.35)
RGB input unit	GT15V-75R1	-*
Video/RGB input unit	GT15V-75V4R1	85(3.35)
RGB output unit	GT15V-75ROUT	-*

* Prohibited areas for installing the control panel side installation unit with the extension unit do not exist.

(d) For GT156□

The control panel side installation unit cannot be installed within 25mm (0.98inch) from the GOT.

When the other extension units are used, the control panel side installation unit cannot be installed in the areas shown in the following figure.



Prohibited area for installation with an extension unit

Extension unit	Model	X (Unit: mm(inch))
Bus connection unit	GT15-ABUS, GT15-ABUS2, GT15-75ABUS2L, GT15-75ABUSL	-*
	GT15-QBUS, GT15-QBUS2, GT15-75QBUSL, GT15-75QBUS2L	47(1.85)
Serial communication unit	GT15-RS2-9P, GT15-RS4-9S GT15-RS4-TE	-*
Ethernet communication unit	GT15-J71E71-100	
MELSECNET/H communication unit	GT15-J71LP23-25	91(3.58)
	GT15-J71BR13	46(1.85)
MELSECNET/10 communication unit	GT15-75J71LP23-Z	91(3.58)
	GT15-75J71BR13-Z	-*
CC-Link IE controller network communication unit	GT15-J71GP23-SX	91(3.58)
CC-Link communication unit	GT15-J61BT13, GT15-75J61BT13-Z	-*
Printer unit	GT15-PRN	

* Prohibited areas for installing the control panel side installation unit with the extension unit do not exist.

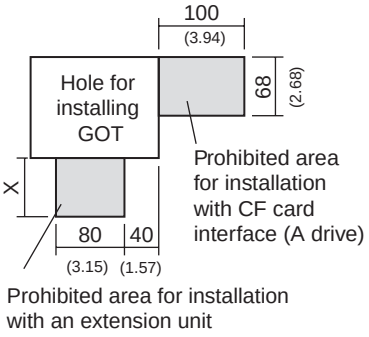
(e) For GT155□

The control panel side installation unit cannot be installed within 25mm (0.98inch) from the GOT.

When the CF card interface of the GOT (A drive) is used, the unit cannot be installed in the area of 100mm wide by 68mm long on the right side of the hole for installing the GOT in the rear view.

A CF card cannot be inserted and ejected.

When the other extension units are used, the control panel side installation unit cannot be installed in the areas shown in the following figure.

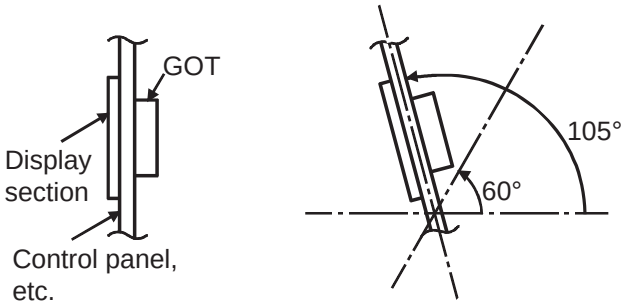


Extension unit	Model	X (Unit: mm(inch))
Bus connection unit	GT15-ABUS, GT15-ABUS2, GT15-75ABUSL, GT15-75ABUS2L	57(2.24)
	GT15-QBUS, GT15-QBUS2, GT15-75QBUSL, GT15-75QBUS2L	79(3.11)
Serial communication unit	GT15-RS2-9P, GT15-RS4-9S	56(2.20)
	GT15-RS4-TE	-*
Ethernet communication unit	GT15-J71E71-100	
MELSECNET/H communication unit	GT15-J71LP23-25	117(4.61)
	GT15-J71BR13	71(2.80)
CC-Link IE controller network communication unit	GT15-J71GP23-SX	117(4.61)
CC-Link communication unit	GT15-J61BT13, GT15-75J61BT13-Z	-*
Printer unit	GT15-PRN	

* Prohibited areas for installing the control panel side installation unit wi extension unit do not exist.

6.4 Control Panel Inside Temperature and Mounting Angle

When mounting the main unit to a control panel or similar, set the display section as shown below.
When the temperature inside the control panel is 40 to 55°C or less, the mounting angle should be in the range 60 to 105 degrees.



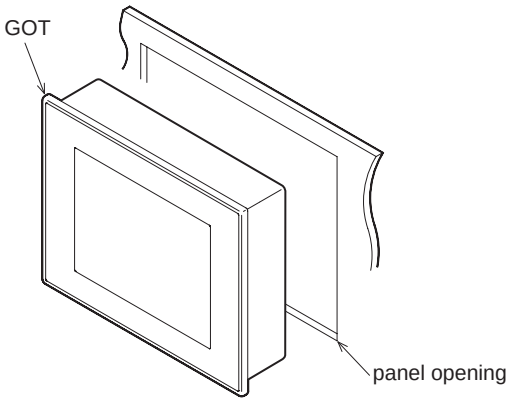
- The GOT will be deteriorated earlier if it is used at the mounting angle other than the above. Therefore, the temperature inside the control panel should be within 40°C.

*: When mounting an extension unit on the upper stage of MELSECNET/H communication unit (GT15-J71LP23-25, GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13), the operating ambient temperature must be reduced 5°C against the maximum values described in general specifications.

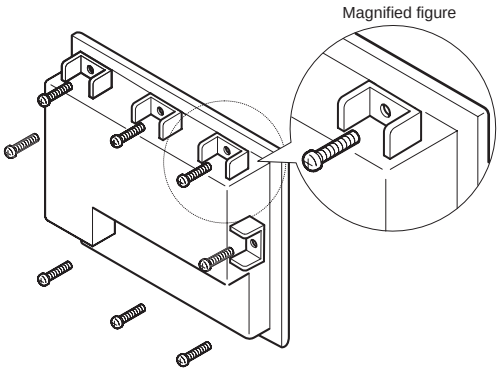
6.5 Installation Procedure

The GOT mounting procedure is as follows.
For the panel cutting dimensions of each GOT, refer to the following.
☞6.2 Panel Cutting Dimensions

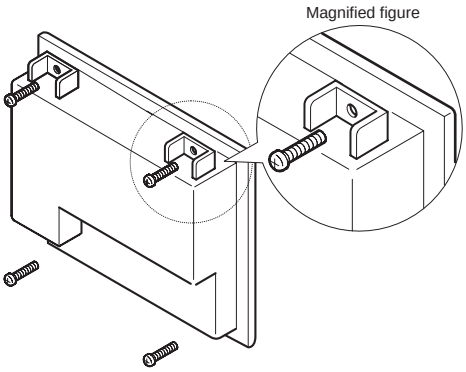
1 Insert the GOT into the panel opening from the front side.



2 Place the mounting fixtures (included with GOT) on the mounting fixture attaching part of the GOT, and fix them by tightening the mounting screws in the torque range of 0.36 to 0.48N·m.
(Failure to do so may distort the panel and make a surface waviness on the protective sheet.)



For GT1595-X: Fix the GOT with 8 mounting fixtures.



For other than GT1595-X: Fix the GOT with 4 mounting fixtures.

3 A protection film is attached on the display section of GOT prior to shipment.
Remove the film when the installation is compelted.

7. WIRING

DANGER

- Before starting wiring, always switch off the GOT power externally in all phases.
  Not doing so may cause an electric shock, product damage or malfunction.

CAUTION

- Please make sure to ground FG terminal, LG terminal, and protective ground terminal of the GOT power supply section by applying Class D Grounding (Class 3 Grounding Method) or higher which is used exclusively for the GOT.
  Not doing so may cause an electric shock or malfunction.
- Correctly wire the GOT power supply section after confirming the rated voltage and terminal arrangement of the product.
  Not doing so can cause a fire or failure.
- Tighten the terminal screws of the GOT power supply section in the specified torque range. Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction due to the damage of the screws or the GOT.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT. Not doing so can cause a fire, failure or malfunction.

This section describes wiring to the GOT power supply section.
For the connection to a controller, refer to the following manual.

☞GOT1000 Series Connection Manual

For external dimensions of connection cable, refer to the following.

☞Appendix.1 External Dimensions

Remark

General preventive measures against noise

There are two kinds of noises: Radiated noise that is transmitted into the air and Conductive noise that is directly transmitted along connected lines.
Countermeasures must be taken considering both kinds of noises and referring to the following 3 points.

(1) Protecting against noise
   (a) Keep signal lines away from noise sources such as a power cable or a high-power drive circuit.
   (b) Shield the signal lines.

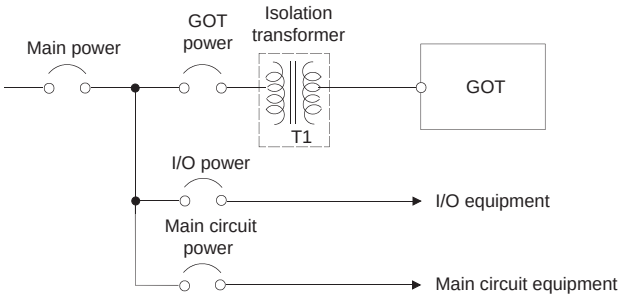
(2) Reducing generated noise
   (a) Use a noise filter, etc. to reduce the level of the noise generated due to a source such as a high-power motor drive circuit.
   (b) Attach a surge suppressor on the terminal of the molded case circuit breaker (MCCB), electromagnetic contactor, relay, solenoid valve, or induction motor to supress the noise.

(3) Releasing noise to the ground
   (a) Make sure to connect the ground cable to the ground.
   (b) Use a short and thick cable to lower its ground resistance.
   (c) Ground the power system and the control system separately.

7.1 Power Supply Wiring

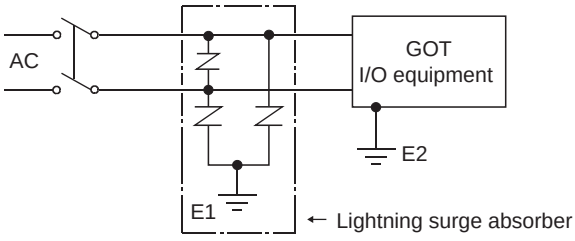
- Make wiring connections to the power supply, I/O equipment and power equipment separately by system as shown below.
  When frequent noise is identified, connect an isolation transformer.

  Wiring diagram for power supply



- Twist 100V AC, 200V AC or 24V DC cable as closely as possible and connect the cable of the minimum length between modules.
  Also, use the thickest cable as possible (Max. 2mm^2) to minimize the voltage drop.
  Use M3 solderless terminals and securely tighten them with a tightening torque of 0.5 to 0.8N•m so that no problem will result.
- Separate the 100V AC, 200V AC or 24V DC cable from the main circuit lines (high voltage, large current) and/or I/O signal lines.
  Keep a distance of 100mm or more.
- As measures against surge due to lightning, connect a lightning surge absorber as shown below.

  Lightning surge absorber connection

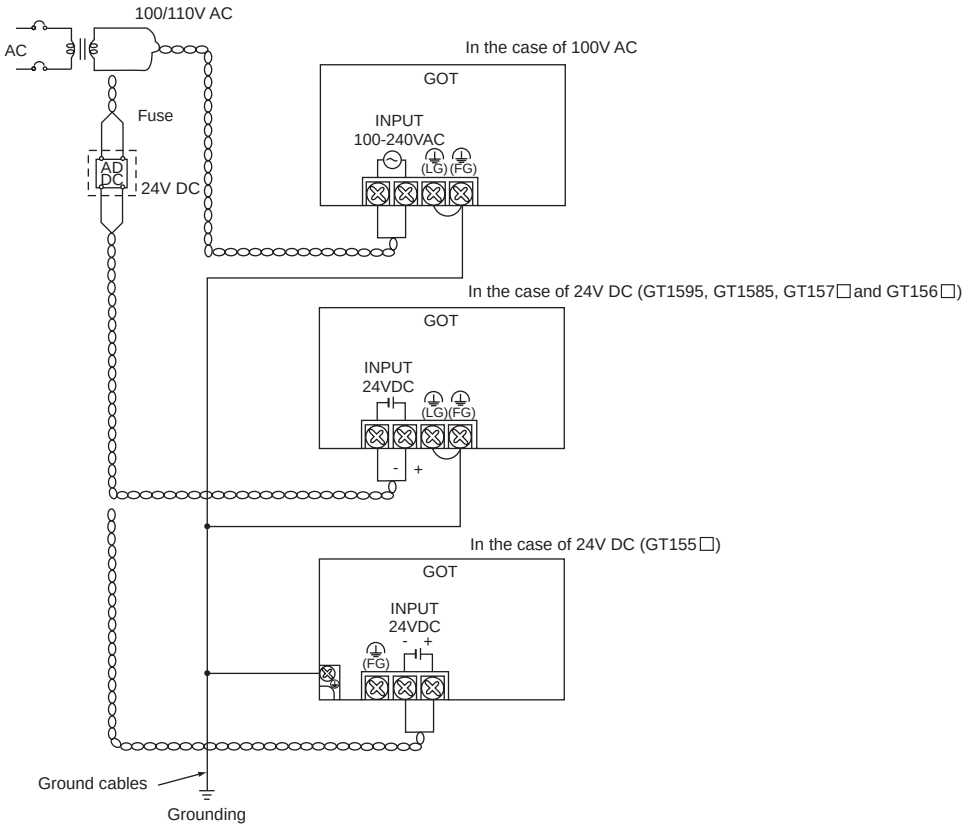


Point

1. Separate the grounding of the lightning surge absorber (E1) from the grounding of the GOT (E2).
2. Select an appropriate lightning surge absorber so that the supply voltage does not exceed the maximum allowable circuit voltage of the surge absorber even when it rises to the maximum.

7.2 Wiring to GOT Power Section

This section provides an example for connecting power cables and ground cables to the power terminals situated on the back of the GOT.



Point

(1) Precautions for wiring to the power supply section

- For 100V AC, 200V AC or 24V DC cable, use the thickest cable as possible (Max. 2mm^2) and start twisting them at the position closest to the connected terminals.
  To prevent a short circuit due to loose screws, use the solderless terminal with insulation sleeve.
- When connection is made between LG and FG terminals, be sure to connect them to the ground.
  Otherwise, the system becomes susceptible to noise.
  Since the LG terminal has potential equal to a half of the input voltage, touching the terminal may lead to an electric shock.
- When grounding the GT155□, ground it with the ground terminal equipped at the lower-left corner on the GOT main unit back face.
  (Refer to the above.)
  Connect only the ground cables of the bus connection cable and the CF card extension unit connection cable to the FG terminal.

(2) Wiring the power section of the GT155□ when using an extension unit
Be sure to wire the power section before connecting a cable to the extension unit. If connecting a cable to the extension unit before wiring the power section, the terminal block of the power section will be blocked by the cable and the power section cannot be wired.

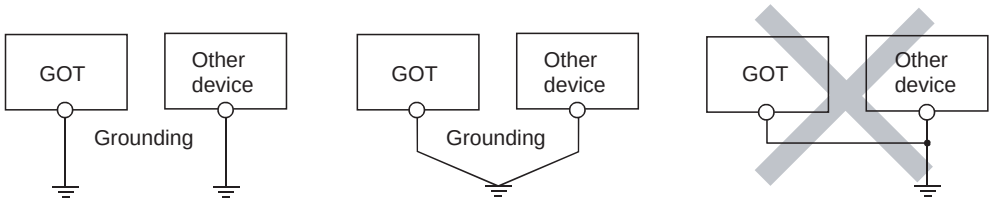
7.3 Grouding

7.3.1 Grounding the GOT

1 About grounding

Perform the following three items for grounding.

- Independent grounding should be performed as possible for the GOT.
  Perform grounding works. (grounding resistance 100Ω or less)
- When independent grounding cannot be performed for the GOT, perform "(2) Shared grounding" shown below.



(1) Independent ground
..... Best condition

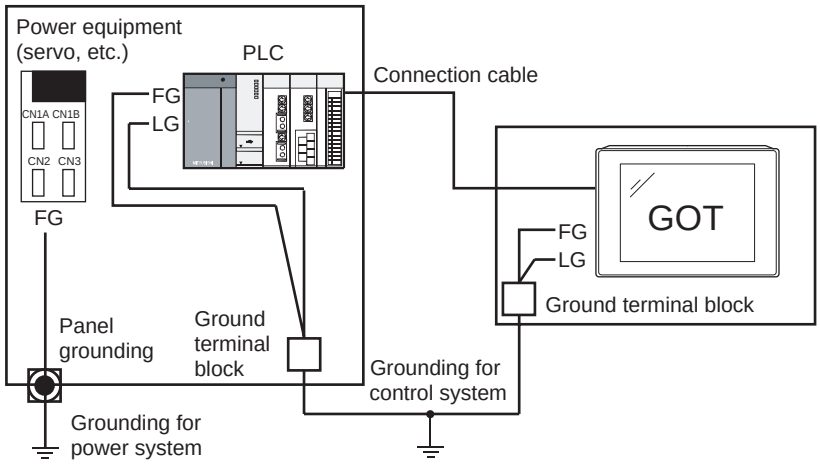
(2) Shared grounding
..... Good condition

(3) Common grounding
..... Not allowed

- Use a cable of 2mm^2 or more for grounding when performing (1) or (2) above.
  Ground the cable at a point as close to the GOT as possible to make the ground cable short.

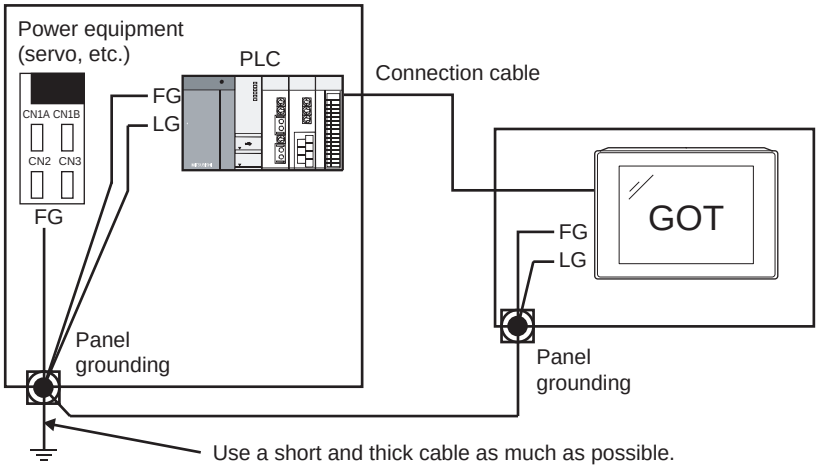
2 Grounding examples

(1) Independent grounding (Best)



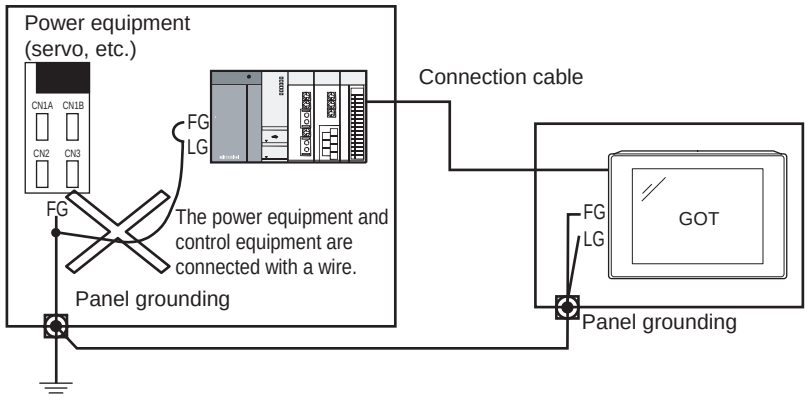
* For the control equipment, ground the system at one end.
Especially for the control equipments communicating each other, ground the system at one end.

(2) Shared grounding (Good)



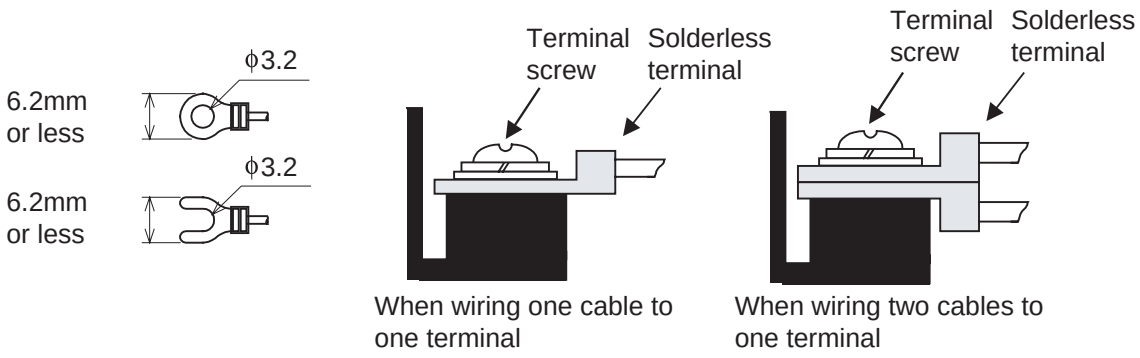
* Ground the system at one end.
To prevent noise from entering the GOT, use a short and thick wire for grounding between the ground and the panel to ensure lower ground resistance.

(3) Common grounding (Not allowed)



* Do not connect the ground cables of the power equipment and control equipment with a wire.
If the cables are connected, noise from the power equipment may influence the control equipment, causing malfunction.

3 Recommended terminal shape



Applicable solderless terminal	RAV1.25- 3, V2- S3.3, V2- N3A, FV2- N3A

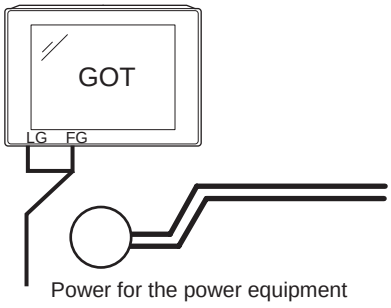
7.3.2 Wiring-related malfunction causes and the measures examples

The malfunction causes in grounding the GOT include potential difference caused by groundings and noise. Potential difference and noise may be reduced by taking the following measures.

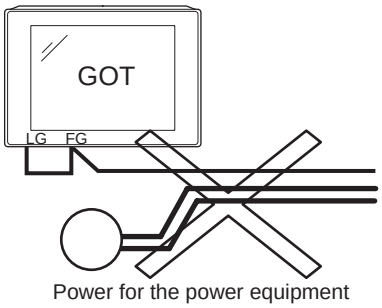
1 Wiring of GOT's ground cable and power line

When the ground cable and power line of the GOT are installed together, the GOT may malfunction due to noise.

Separating the ground cable and power line of the GOT in wiring reduces the influence of noise.



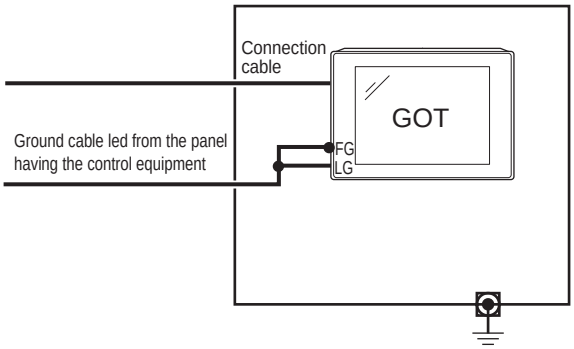
Good example: The ground and power cables are separated in wiring.



Bad example: The ground and power cables are installed together.

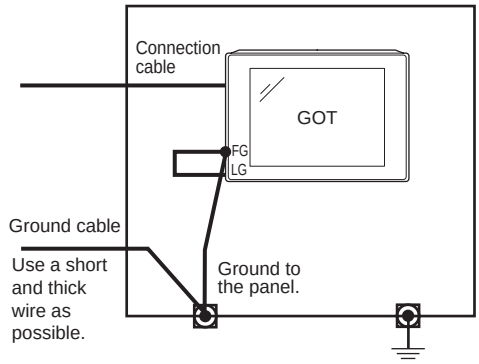
2 Leading of the ground cable from the panel having a control equipment in the panel having the GOT

When a single ground cable is led from the panel having a control equipment such as PLC in the panel having the GOT, the cable may need to be directly connected to the terminal block of the GOT.

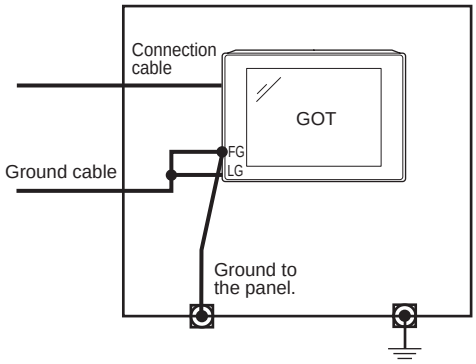


The malfunction occurred by the potential difference caused by the groundings in such a case, may be prevented by reducing the voltage with the following measure example 1, where the voltage is reduced.

Measure example 1 (Refer to the measure examples 1-1 and 1-2 below.)
When any potential difference occurs between the ground cable and the panel having the GOT and the GOT is influenced by the potential difference, connect another ground cable to the panel.
When taking of measure 1-1 is difficult since the wiring cannot be done for example, perform the wiring as shown in 1-2.



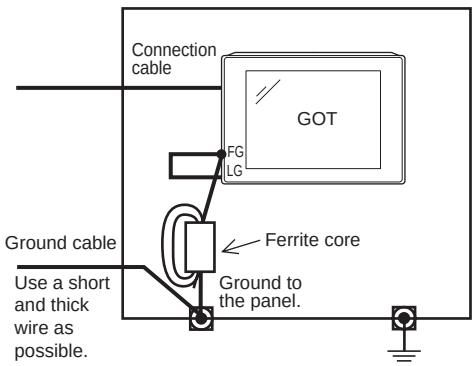
Measure example 1-1



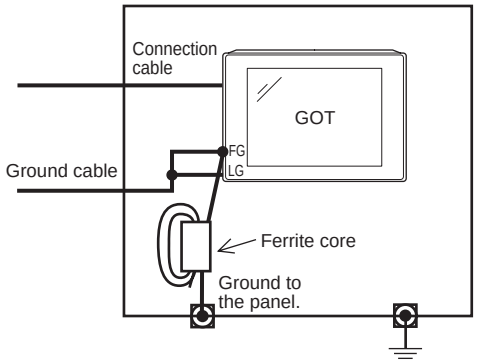
Measure example 1-2

If the GOT is affected by noise when measure example 1 is taken, the influence of noise may be reduced with the following measure example 2.

Measure example 2 (Refer to the measure examples 2-1 and 2-2 below.)
When the noise generated from the panel affects the GOT even if measure example 1 is taken, attach the ferrite core.
When attaching a ferrite core, insert the wire into the hole of the ferrite core several times (approximately three times).
When taking of measure 2-1 is difficult since the wiring cannot be done for example, perform the wiring as shown in 2-2.



Measure example 2-1



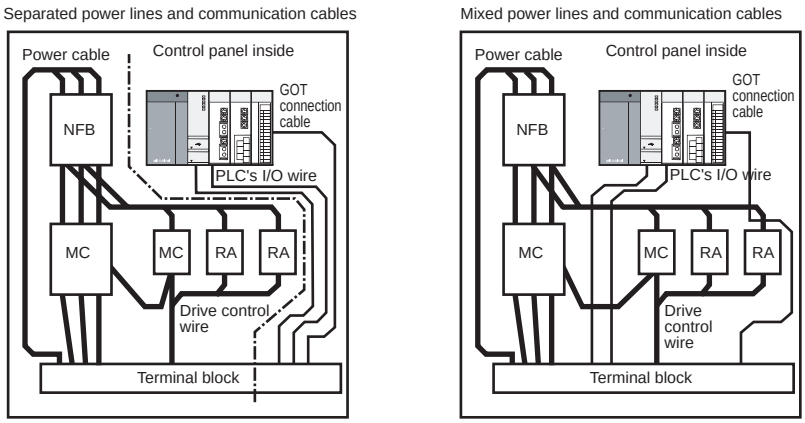
Measure example 2-2

7.4 Panel Inside Wiring, Panel Outside Wiring

7.4.1 Panel inside wiring

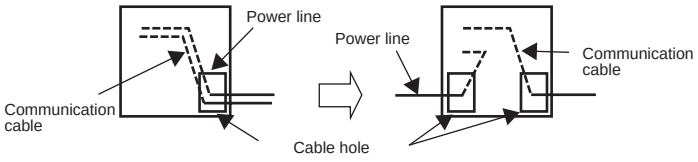
In wiring, the power line connected to the power or servo amplifier and the communication cable such as bus connection cable or network cable must not be mixed.
Mixing the power line and communication cable may cause malfunction due to noise.
When using an equipment that may occur surge noise, such as molded case circuit breaker (MCCB), electromagnetic contactor (MC), relay (RA), solenoid valve, or induction motor, using a surge suppressor is effective.
For surge suppressor, refer to the following.

☞7.5 Attaching Surge Suppressor for Control Equipment



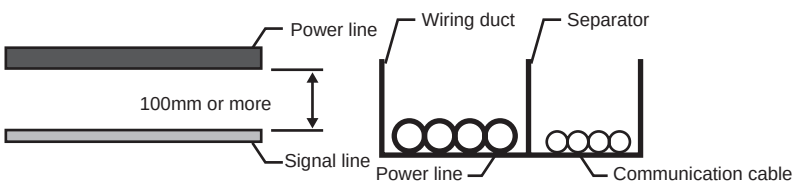
7.4.2 Panel outside wiring

When leading the power line and communication cable outside the panel, open cable holes at two separate places to lead the cables separately out.
If cables are led out through the same cable hole for wiring reasons, the cables are more easily influenced by noise.



Wiring for leading the power line and communication cable out from the panel

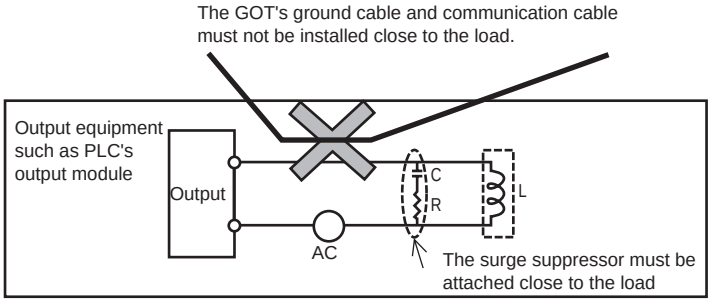
Install the power line and communication cable as apart from each other as possible in the duct.
If the cables are installed closely with each other for wiring reasons, using a separator (made of metal) can make the cables less influenced by noise.



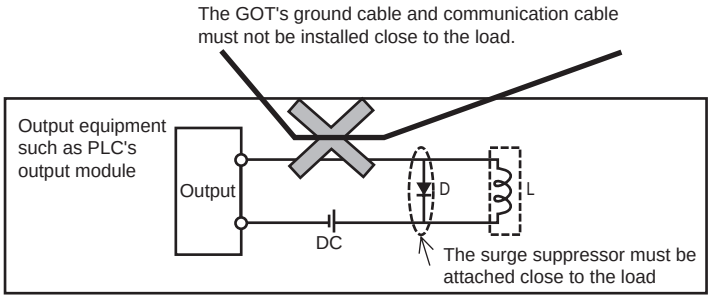
Wiring of power lines and communication cables in the duct

7.5 Attaching Surge Suppressor for Control Equipment

If an improper operation such as communication error occurs in the GOT in synchronization with ON/OFF of a particular control equipment (hereinafter abbreviated to load) such as MCCB, electromagnetic contactor, relay, solenoid valve, or induction motor, the GOT may be influenced by surge noise.
In such a case, install the ground cable or communication cable apart from the load.
If the ground cable or communication cable has to be installed close to the load unavoidably, attaching a surge suppressor is effective.
Attach the surge suppressor at the position closest to the load.



Measures for AC inductive load



Measures for DC inductive load

7.6 Grounding Extension Units

7.6.1 Wiring FG cable of bus connection cable

This section describes wiring of the FG cable when a PLC CPU is connected to the GOT.

Point

Cable connected to the PLC CPU

Do not install the connection cable together with the main circuit lines (high voltage, large current) or I/O signal lines.

1 When connecting QCPU or motion controller CPU (Q series) to the GOT

- Grounding of the FG cable for QCPU and motion controller CPU (Q series) is not necessary since they have no FG wire.

2 When connecting QnACPU, ACPU, or motion controller CPU (A series) to the GOT

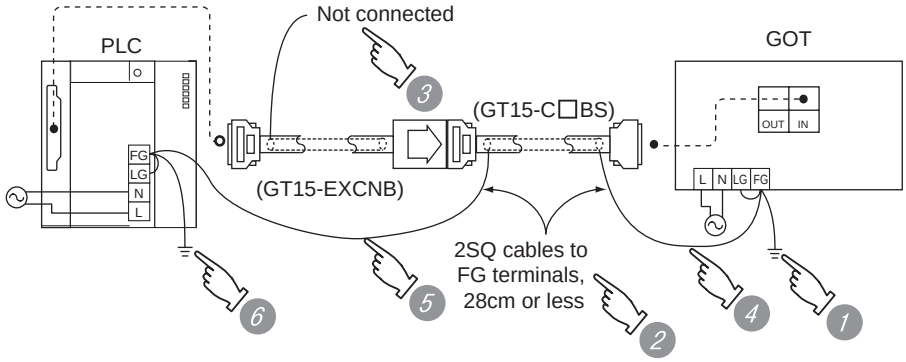
- When using GT15-C□EXSS-1 or GT15C□BS, perform the grounding in the following steps.

Point

(1) GOT terminal block
The terminal block layout of a GOT differs depending on the model.
Before wiring, check the terminal layout of the GOT to be used.

(2) Ground cables
Up to two ground cables can be connected to the LG and FG terminals of the GOT respectively.
For three or more ground cables, connect the third or later ground cables to the LG terminal.

(1) When using GT15-C□EXSS-1



1. Connect the LG and FG terminals of the terminal block on the GOT unit power and ground them with a cable.
2. Use the GT15-C□BS's FG cable of 28cm or less.
3. Do not connect the GT15-EXCNB's FG ground cable.
4. Connect the GT15-C□BS's FG cable on the GOT side to FG of the GOT unit power's terminal block.
5. Connect the GT15-C□BS's FG cable on the PLC side to FG of the PLC's power supply module.
6. Connect the LG and FG terminals of the terminal block on the PLC and ground them with a cable.

(2) When using GT15-C□BS

For the both side GOTs, connect the LG and FG terminals of the terminal block on the GOT unit power and ground them with a cable.

7.6.2 Wiring FG cable of CF card extension unit connection cable

The following explains wiring the FG cable when the CF card extension unit is installed on the GOT.

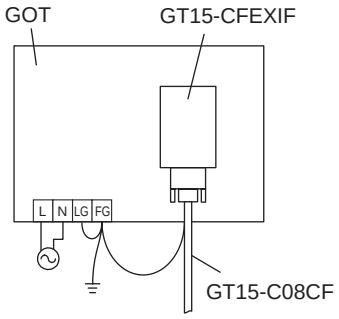
Point

(1) Cables to be connected to CF card extension unit
Do not install the connection cable together with the main circuit lines (high voltage, large current) and I/O signal lines.

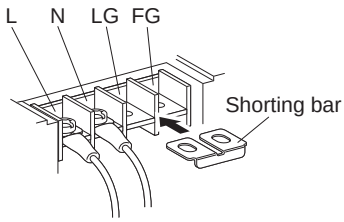
(2) GOT terminal block
The terminal block layout of a GOT differs depending on the model.
Before wiring, check the terminal layout of the GOT to be used.

(3) Ground cables
Up to two ground cables can be connected to the LG and FG terminals of the GOT respectively.
For three or more ground cables, connect the third or later ground cables to the LG terminal.

When the CF card extension unit is used, ground the ground cable as shown below.

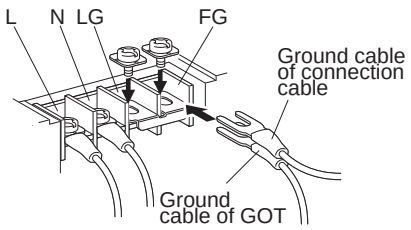


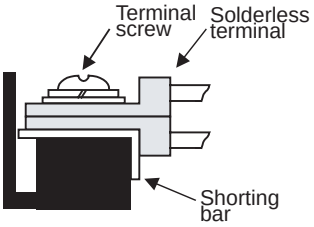
1 Install the shorting bar to the LG and FG terminals of the GOT's power.
For GT155□, shorting is not needed.



2 Connect the ground cable of the connection cable with the GOT's ground cable to the FG terminal of the GOT's power.

For GT155□, connect the ground cable of the connection cable to the FG terminal of the GOT's power, and connect the GOT's ground cable to the protective ground terminal.
For connecting the ground cables, each flat side of the two solderless terminals must be faced.





For the ground cable of the connection cable, use the following solderless terminals.

Applicable solderless terminal	RAV1.25-3, V1.25-B3A, FV1.25-B3A

For grounding the GOT, refer to the following.

☞ 7.2 Wiring to GOT Power Section

8. OPTION

8.1 Communication Unit

The communication unit is used to relate the GOT extension interfaces to the system at the connection destination.
To connect the communication unit, make Communication Settings for communications with a PLC.
For details of connection, refer to the following manual.

☞GOT1000 Series Connection Manual

8.1.1 Applicable communication unit

The following communication units are applicable for GT15□□.

Product name	Model	Description		
Bus connection unit	GT15-QBUS*1	For QCPU (Q mode)/motion controller CPU (Q series) connection (standard model)	For last GOT, Number of IN side connectors: 1	For 15", 12.1", 10.4", 8.4", 5.7"
	GT15-QBUS2*1		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side	
	GT15-ABUS*1	For A/QnACPU/motion controller CPU (A series) connection (standard model)	For last GOT, Number of IN side connectors: 1	
	GT15-ABUS2*1		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side	
	GT15-75QBUSL	For QCPU (Q mode)/motion controller CPU (Q series) connection (slim model)	For last GOT, Number of IN side connectors: 1	
	GT15-75QBUS2L		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side	
	GT15-75ABUSL	For A/QnACPU/motion controller CPU (A series) connection (slim model)	For last GOT, Number of IN side connectors: 1	
	GT15-75ABUS2L		For intermediary and last GOT, Number of IN and OUT side connectors: 1 for each side	
Serial communication unit	GT15-RS2-9P*1	For RS-232 interface connection, connector type		
	GT15-RS4-9S*1	For RS-422 interface connection, connector type		
	GT15-RS4-TE*1	For RS-422 interface connection, terminal block type		
Ethernet communication unit	GT15-J71E71-100	Ethernet (100Base-TX/10Base-T) unit		
MELSECNET/H communication unit	GT15-J71LP23-25*2	Optical double loop unit		
	GT15-J71BR13*2	Coaxial bus unit		

Product name	Model	Description	
MELSECNET/10 communication unit	GT15-75J71LP23-Z	Optical loop unit (A9GT-QJ71LP23 + GT15-75IF900 set)	For 15", 12.1", 10.4", 8.4"
	GT15-75J71BR13-Z	Coaxial bus unit (A9GT-QJ71BR13 + GT15-75IF900 set)	
CC-Link IE controller network communication unit	GT15-J71GP23-SX*3	Optical loop unit	For 15", 12.1", 10.4", 8.4", 5.7"
CC-Link communication unit	GT15-J61BT13*2	Intelligent device station unit CC-LINK Ver. 2 compliant	For 15", 12.1", 10.4", 8.4", 5.7"
	GT15-75J61BT13-Z	Intelligent device station unit (Set of A8GT-61BT13+GT15-75IF900)	For 15", 12.1", 10.4", 8.4"
Interface converter unit	GT15-75IF900	Conversion unit for GOT-A900/GOT800 series communication unit	

*1 When using this unit, use a standard monitor OS and communication driver of GT Designer2 Version2.15R or later. With a standard monitor OS and communication driver of an older version, the GOT has cannot recognize the unit to perform monitoring.

*2 This can be used with the GT1585-STBA and GT1575-STBA of hardware version C or later or the GT1575-VTBA and GT1565-VTBA of hardware version E or later

*3 When using this unit, use a standard monitor OS and communication driver of GT Designer2 Version2.77F or later.
With a standard monitor OS and communication driver of an older version, the GOT has cannot recognize the unit to perform monitoring.

8.1.2 Installing procedure

This section describes how to install a communication unit on a GOT.
A communication unit can also be installed together with another extension unit.
When installing a communication unit together with some other extension unit, after executing the procedure in this section, refer to the following.

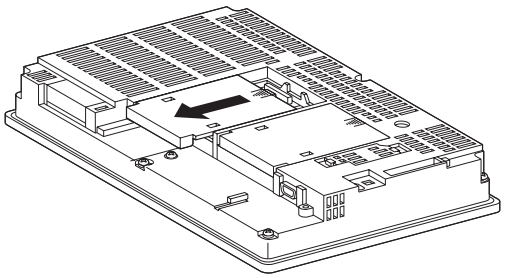
☞ 8.1.3 Installing multiple extension units in layers

1 Bus connection unit

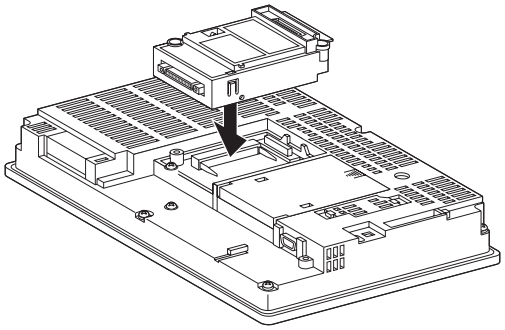
(1) GT15-QBUS, GT15-ABUS

1 Power OFF the GOT.

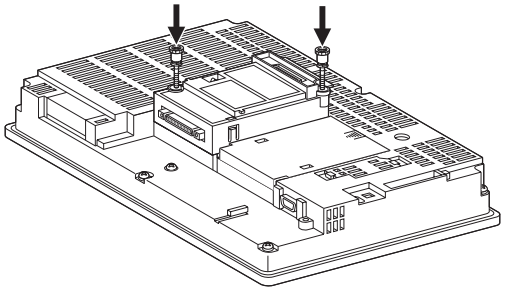
2 Remove one extension unit cover of the GOT.



3 Fit the communication unit in the GOT case.



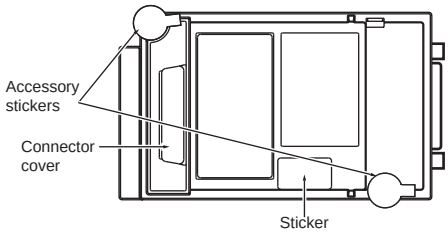
4 Fasten the communication unit by tightening its mounting screws (2 places) with tightening torque of 0.36 to 0.48 N·m



5 When installing an extension unit on the unit that has been installed, refer to the following.

☞ 8.1.3 Installing multiple extension units in layers

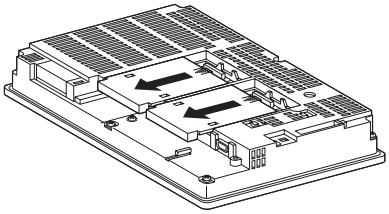
When not installing an extension unit on the unit that has been installed, in order to avoid receiving electrostatic, stick accessory stickers to cover the top of mounting screws (2 places).
Keep the connector cover fixed.
Keep the sticker stuck as it is.



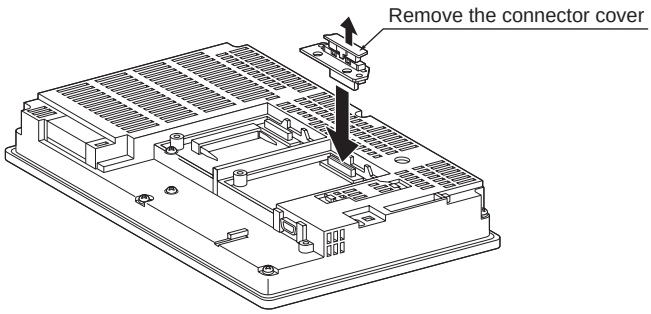
(2) GT15-QBUS2, GT15-ABUS2

1 Power OFF the GOT.

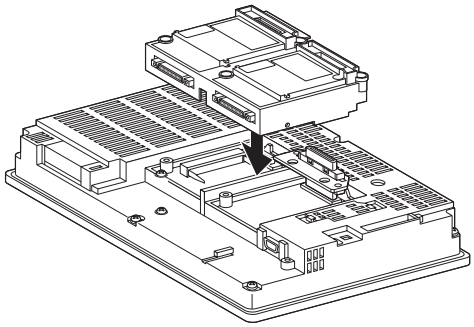
2 Remove the two extension unit covers of the GOT rear face.



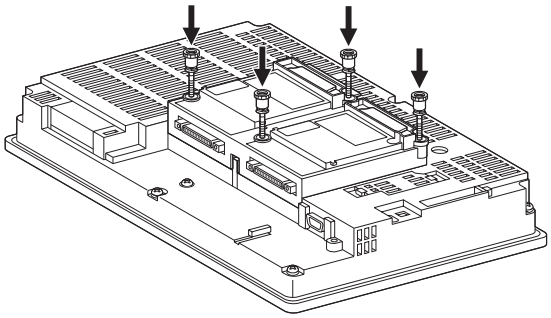
3 Install the extend interface relay board on the Extend I/F-2 side of the GOT.
After the installation, detach the connector cover from the extend interface relay board.
For GT155□, the extension interface relay board is not needed.



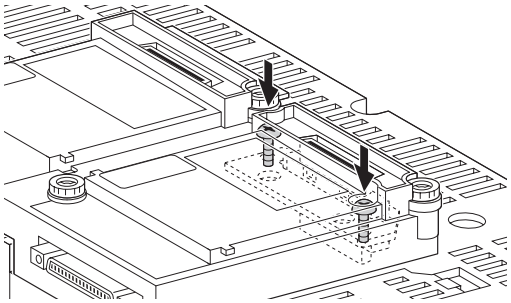
4 Install the communication unit in the extension interface of the GOT rear face.
(When the extension unit is installed in GOT, remove the installed extension unit. And, do not touch the board in the GOT when install the communication unit.)



5 After the installation, tighten the mounting screws (4 places) in the specified torque range (0.36 to 0.48N·m).



6 Tighten the extend interface relay board installed by the step 3 within the specified torque range (0.36 to 0.48N·m). (2 places)



Point

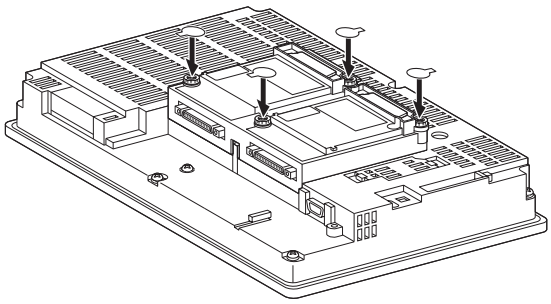
Removing the GT15-QBUS2, GT15-ABUS2

Before removing the unit, unscrew the extend interface relay board fixing screws.
(☞ above 6)

7 When installing an extension unit on the outer layer, refer to the following.

☞ 8.1.3 Installing multiple extension units in layers

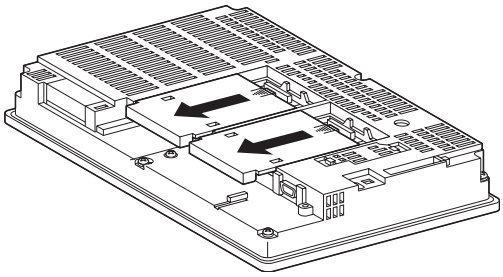
When not installing an extension unit on the outer layer, cover the top of mounting screws (4 places) with accessory stickers in order to avoid receiving static electricity.
Keep the connector cover fixed.
Keep the sticker stuck as it is.



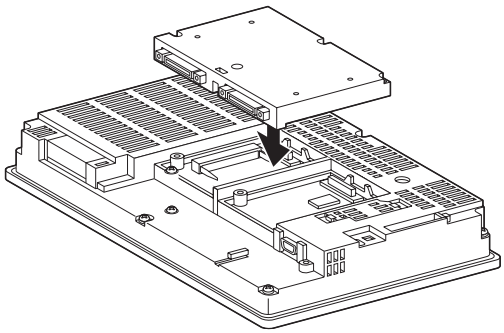
(3) GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L

1 Power OFF the GOT.

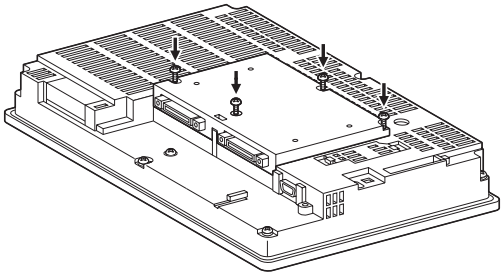
2 Remove the two extension unit covers of the GOT rear face.



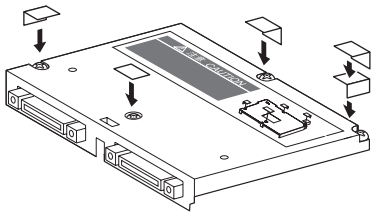
3 Install the communication unit on the extension interface of the GOT rear face.
(When the extension unit is installed in GOT, remove the installed extension unit. And, do not touch the board in the GOT when install the communication unit.)



4 After the installation, tighten the mounting screws (4 places) in the specified torque range (0.42 to 0.57N·m).



5 Paste the provided stickers after tightening the mounting screws in order to avoid receiving electrostatic.



2 Serial communication unit, Ethernet communication unit

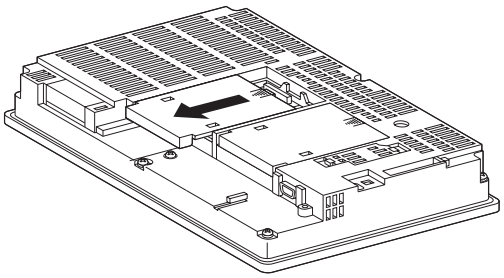
(1) Unit installation

The following explanation uses the Ethernet communication units as an example.
The serial communication unit can be installed with the same procedure.

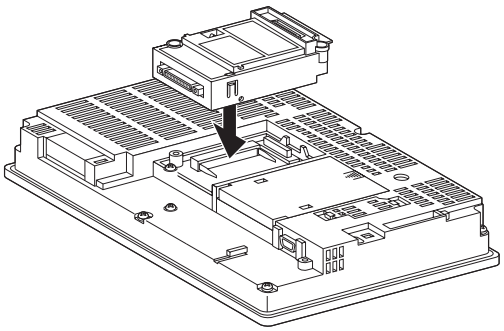
1 Power OFF the GOT.

2 Remove one extension unit cover of the GOT.

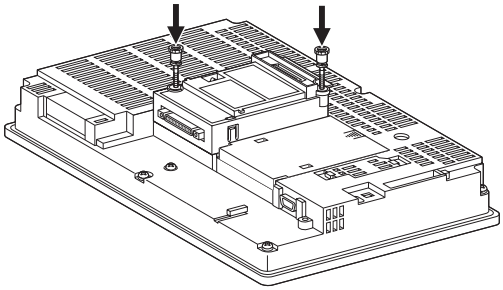
.



3 Fit the communication unit in the GOT case.



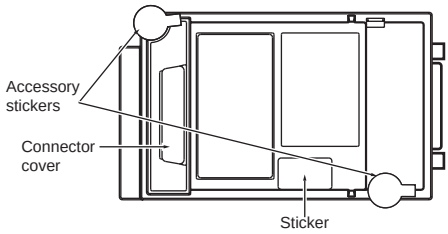
4 Fasten the communication unit by tightening its mounting screws (2 places) with tightening torque of 0.36 to 0.48 N·m.



5 When installing an extension unit on the outer layer, refer to the following.

☞ 8.1.3 Installing multiple extension units in layers

When not installing an extension unit on the outer layer, cover the top of mounting screws (4 places) with accessory stickers in order to avoid receiving static electricity.
Keep the connector cover fixed.
Keep the sticker stuck as it is.



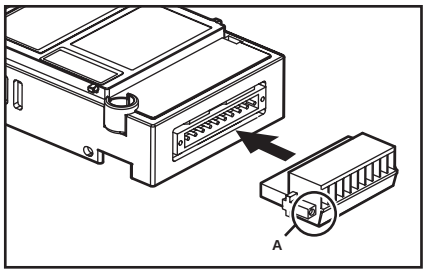
Point

Remove the serial communication unit, Ethernet communication unit

If you remove the serial communication unit or Ethernet communication unit, detach it from specified direction (shown PULL) so as not to break a connector.

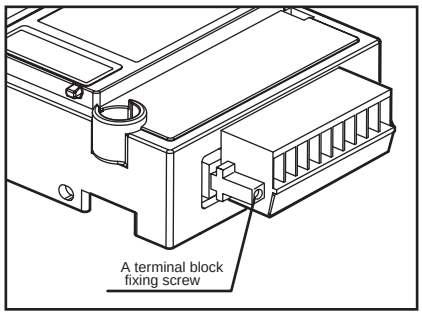
(2) Terminal block socket installation (For GT15-RS4-TE only)

1 Insert the terminal block socket in the serial communication unit.



2 Fasten the terminal block by tightening the terminal block fixing screws (2 places) with the tightening torque of 0.20 to 0.25 N·m.

(Extended figure of part A)



Point

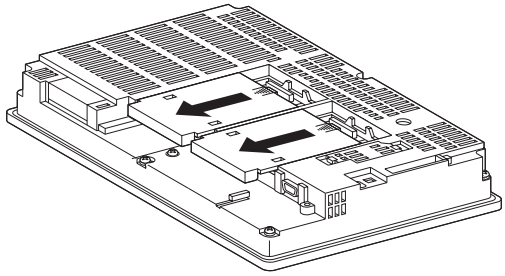
When attaching or removing a communication cable

When attaching or removing a communication cable to/from the terminal block socket, detach the terminal block socket from the connector.
(When extension units are installed in multiple layers, the units do not have to be removed from the GOT main unit.)

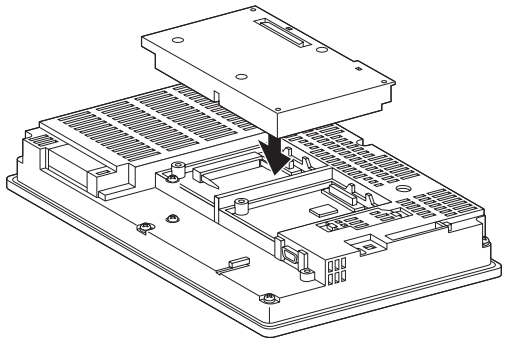
3 MELSECNET/10 communication unit, CC-Link communication unit

1 Power off the GOT.

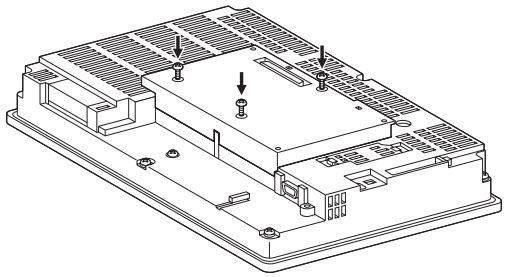
2 Remove the two extension unit covers of the GOT.



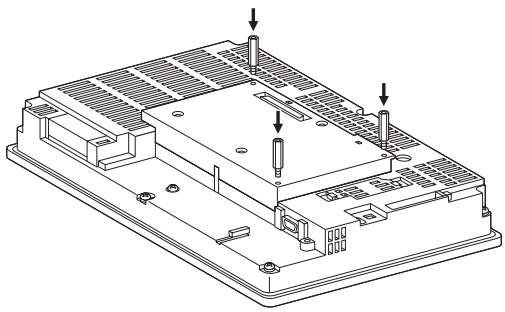
3 Fit the GT15-75IF900 in the GOT case.



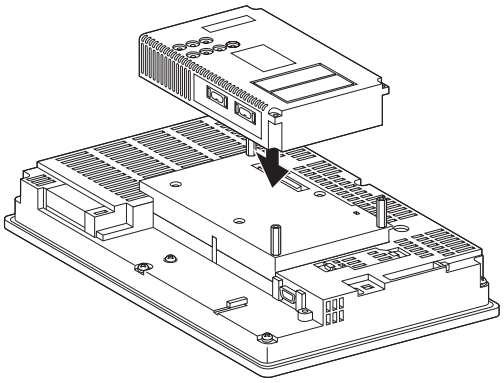
4 Fasten the GT15-75IF900 by tightening its mounting screws (3 places) with tightening torque 0.36 to 0.48 N·m.



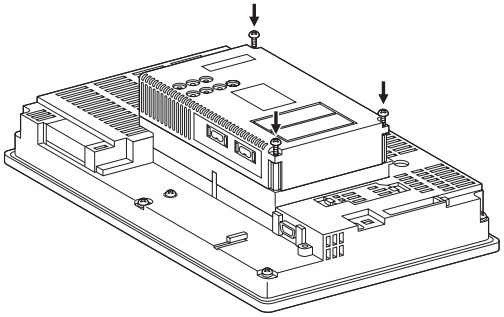
5 Attach the communication unit fixing brackets (3 places) to GT15-75IF900, then fasten them with tightening torque of 0.36 to 0.48 N·m.



6 Mount the network unit (A9GT-QJ71LP23 or A9GT-QJ71BR13) or CC-Link communication unit (A8GT-J61BT13) to GT15-75IF900.



7 Fasten the unit fixing brackets (3 places) with tightening torque of 0.36 to 0.48N·m.

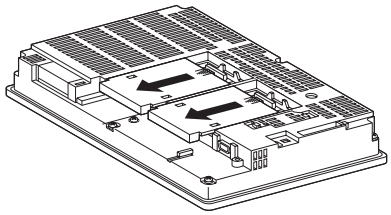


4 MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13)

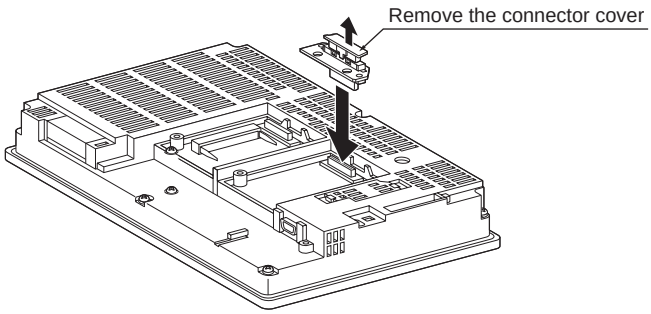
(1) Unit installation

1 Power OFF the GOT.

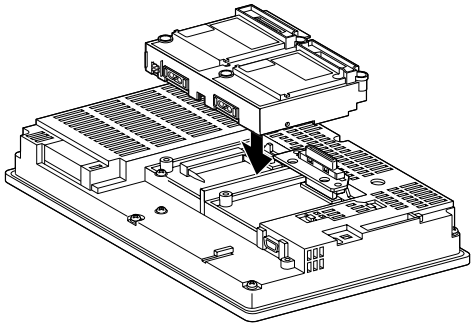
2 Remove the two extension unit covers of the GOT rear face.



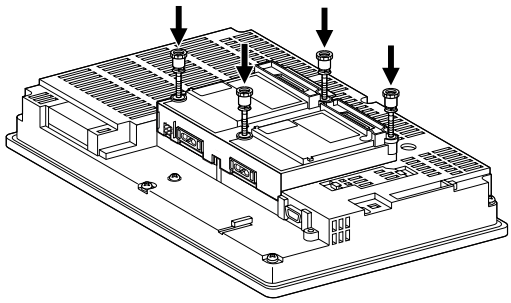
3 Install the extend interface relay board on the Extend I/F-2 side of the GOT.
After the installation, detach the connector cover from the extend interface relay board.
For GT155□, the extension interface relay board is not needed.



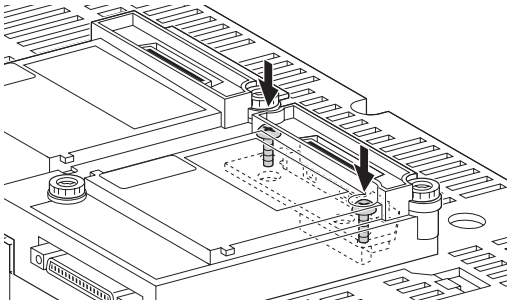
4 Install the communication unit on the extension interface of the GOT rear face.
(When the extension unit is installed in GOT, remove the installed extension unit. And, do not touch the board in the GOT when install the communication unit.)



5 After the installation, tighten the mounting screws (4 places) in the specified torque range (0.36 to 0.48N·m).



6 Tighten the extend interface relay board installed by the step 3 within the specified torque range (0.36 to 0.48N·m). (2 places)



Point

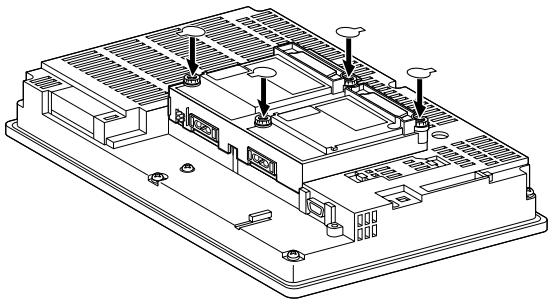
Removing the MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61BT13)

Before removing the unit, unscrew the extend interface relay board fixing screws. (☞ above 6)

7 When installing an extension unit on the unit that has been installed, refer to the following.

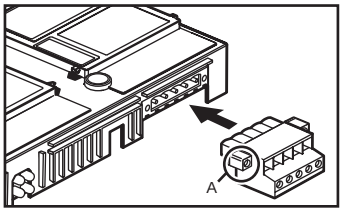
☞ 8.1.3 Installing multiple extension units in layers

When not installing an extension unit on the unit that has been installed, in order to avoid receiving electrostatic, stick accessory labels to cover the top of mounting screws (4 places).
Keep the connector cover fixed.
Keep the sticker stuck as it is.



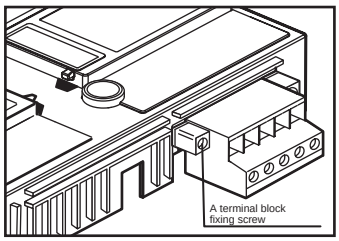
(2) Terminal block socket installation (For GT15-J61BT13 only)

1 Insert the terminal block socket in CC-Link communication unit.



2 Fasten the terminal block by tightening the terminal block fixing screws (2 places) with the tightening torque of 0.20 to 0.25 N·m.

(Extended figure of part A)



Point

When attaching or removing a communication cable

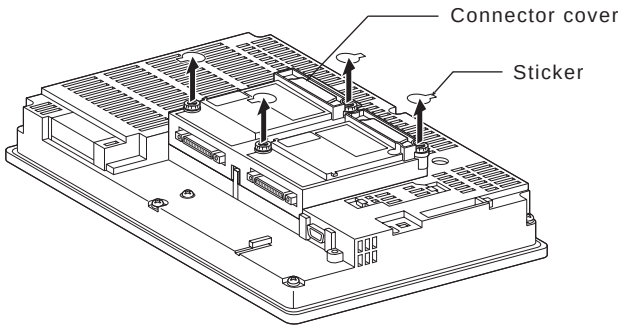
When attaching or removing a communication cable to/from the terminal block socket, detach the terminal block socket from the connector.
(When extension units are installed in multiple layers, the units do not have to be removed from the GOT main unit.)

8.1.3 Installing multiple extension units in layers

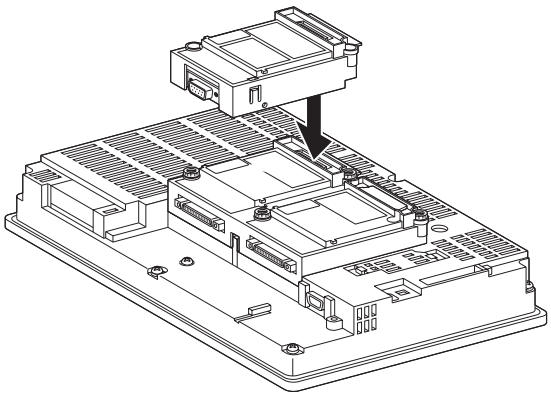
This section describes how to install another extension units on the extension units that has been installed on the GOT.
When no extension units is installed on the GOT, apply the steps in this section after installing an extension units.

- Printer unit (☞ 8.3.2 Installing procedure)
- Video/RGB unit (☞ 8.4.2 Installing procedure)
- Communication unit (☞ 8.1.2 Installing procedure)

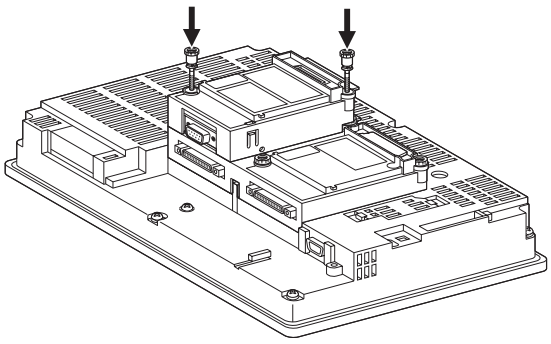
1 Remove the connector cover and sticker from the installed extension units.



2 Install the unit on the unit that has been installed.



3 After installing the unit, fasten it by tightening the mounting screws (2 places) with tightening torque of 0.36 to 0.48N·m.

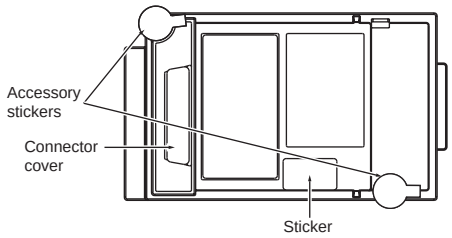


4 When installing another extension unit on the unit that has been installed, implement the above operations of 1 to 3.

When not installing an extension unit on the unit that has been installed, in order to avoid receiving electrostatic, stick accessory stickers to cover the top of mounting screws.

Keep the connector cover fixed.

Keep the sticker stuck as it is.



Point

(1) Installation position for a communication unit that occupies two extend I/Fs
Install a communication unit that occupies two extend I/Fs, such as the following, directly to the GOT main unit.
It cannot be installed on the back stage of another communication unit.
If a video/RGB unit has been installed, install the communication unit on the back stage of that video/RGB unit.

- Bus connection unit (GT15-QBUS2, GT15-ABUS2, GT15-75QBUS2L, GT15-75ABUS2L only)

  (☞8.1.2 1 Bus connection unit)
- MELSECNET/10 communication unit
- (☞8.1.2 3 MELSECNET/10 communication unit, CC-Link communication unit)
- CC-Link communication unit

  (☞8.1.2 3 MELSECNET/10 communication unit, CC-Link communication unit)
- MELSECNET/H communication unit

  (☞8.1.2 4 MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13))
- CC-Link IE controller network communication unit

  (☞8.1.2 4 MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13))
- CC-Link communication unit (GT15-J61BT13)

  (☞8.1.2 4 MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13))

(2) Installing the GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L
These cannot be installed on the back stage of a video/RGB unit. For bus connection, use the GT15-QBUS, GT15-QBUS2, GT15-ABUS, or GT15-ABUS2.

(3) Removing video/RGB unit, bus connection unit (GT15-QBUS2, GT15-ABUS2), MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61BT13)
Before removing the unit, unscrew the extend interface board fixing screws.

- Video/RGB unit

  (☞8.4.2 Installing procedure)
- Bus connection unit (GT15-QBUS2, GT15-ABUS2)

  (☞8.1.2 *1* (2) GT15-QBUS2, GT15-ABUS2)
- MELSECNET/H communication unit

  (☞8.1.2 *4* MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13))
- CC-Link IE controller network communication unit

  (☞8.1.2 *4* MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13))
- CC-Link communication unit (GT15-J61BT13)

  (☞8.1.2 *4* MELSECNET/H communication unit, CC-Link IE controller network communication unit, CC-Link communication unit (GT15-J61B13))

8.2 RS-422 Conversion Unit

The RS-422 conversion unit is inserted to the GOT RS-232 connector to enable the RS-422 communication by RS-232/RS-422 conversion.
Refer to the following for the details of connection statuses.

☞ GOT1000 Series Connection Manual

8.2.1 Applicable RS-422 conversion unit

The following RS-422 conversion units are applicable for GT15□□.

Model name	Description	
GT15-RS2T4-9P	RS-232-RS-422 conversion unit	RS-422 side connector 9 pins (15", 12.1", 10.4", 8.4")
GT15-RS2T4-25P		RS-422 side connector 25 pins (15", 12.1", 10.4", 8.4")

Point

Notes on using the RS-422 conversion unit

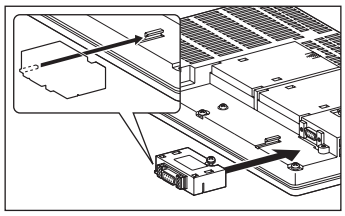
1. Use GT15-RS2T4-25P when you switched to use from the GOT-A900 series. Use GT15-RS2T4-9P when you newly use the GOT1000 series.

2. Set to [ON] by [5V supply] at [Communication settings] of the utility. (☞ 10.1.4 Communication setting display operation)

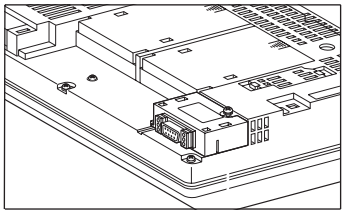
8.2.2 Installing procedure

1. Power OFF the GOT.

2. While sliding the hook of the RS-422 conversion unit along the RS-422 conversion unit mounting rail of the GOT, install the RS-422 conversion unit to the RS-232 interface of the GOT.



3. Tighten the fixing screws in the specified torque range (0.36 to 0.48N·m) after the installation.



8.3 Printer Unit

Printer unit is used for connecting a printer to GOT.
To connect the printer unit, make Communication Settings.
For details of connection, refer to the following manual.

☞GOT1000 Series Connection Manual

8.3.1 Printer unit type

The following type of printer unit can be used for GT15☐☐.

Model name	Description
GT15-PRN	83g (including connector holder and cable clamp)

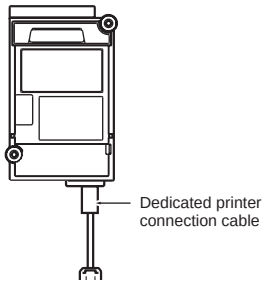
8.3.2 Installing procedure

This section describes how to install printer on GOT.
A printer unit and another extension unit can be installed on a GOT together.
Refer to the following item after implementing the steps described in this section.
One printer unit can be installed at either 1st to 3rd stage of the exteded interface.

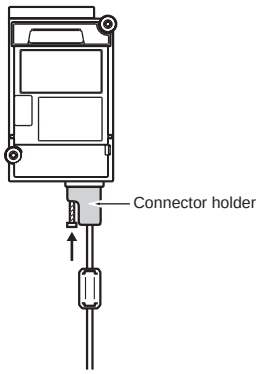
☞8.1.3 Installing multiple extension units in layers

1 Cable connection

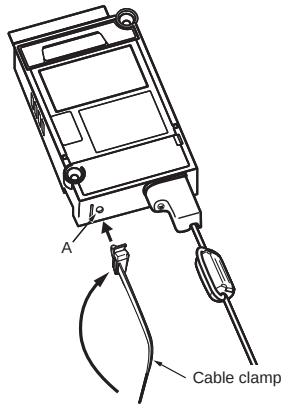
1 Connect the dedicated printer connection cable to the printer unit.



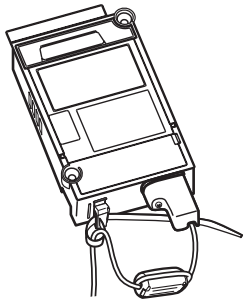
2 Attach the accessory connector holder to the dedicated printer connection cable and tighten the screw of connector holder with tightening torque of 0.36 to 0.48N·m.



3 Depending on the use environment such as when fastening cable is difficult, attach a cable clamp to the printer unit.
Be sure to attach the cable clamp to section A (see the following figure) with its band positioned outside and press it until it clicks.
For the band inserting direction, refer to the arrow.
(As a cable clamp, "RST-1NB" manufactured by TAKEUCHI INDUSTRY CO.LTD. is used.)



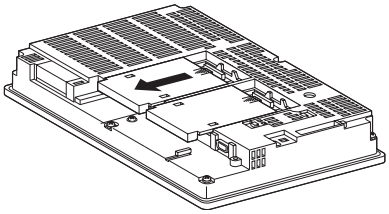
4 Insert the dedicated printer connection cable in the looped cable clamp band and pull the band to fasten the cable.



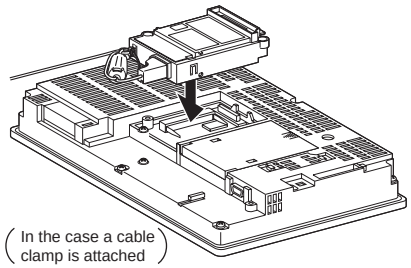
2 Unit installation

1 Power off the GOT.

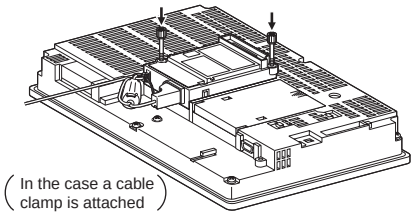
2 Remove one extension unit cover of the GOT.



3 Fit the printer unit in the GOT case.



4 Fasten the printer unit by tightening its mounting screws (2 places) with tightening torque of 0.36 to 0.48 N·m.

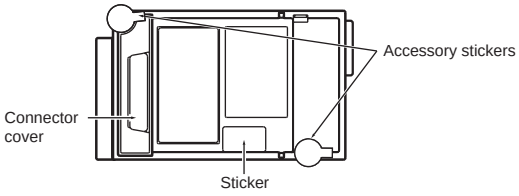


5 When mounting any extension unit in a later stage, refer to the following.

☞ 8.1.3 Installing multiple extension units in layers

When not installing an extension unit on the unit that has been installed, stick accessory stickers on the top of mounting screws (2 places) to cover the top of them in order to avoid receiving electrostatic charge.

Keep the connector cover and sticker fixed as shown in the following figure.



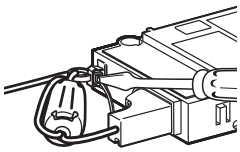
Point

(1) Precautions for connecting the dedicated printer connection cable (USB cable)
- Wait 5s or more between the connection and disconnection of the dedicated printer connection cable.
  If connecting or disconnecting the dedicated printer connection cable shortly after disconnecting or connecting the cable, the GOT may not operate normally.
- Do not connect or disconnect the dedicated printer connection cable during printing.
  Doing so can cause the GOT operate incorrectly.
- Connected printer may not be recognized in rare cases.
  When printer is not recognized, disconnect the dedicated printer connection cable once and connect it again.
- When the printer has been connected to a personal computer and used before it is connected to GOT, power on the printer again and connect it to GOT.
- Any printer cannot be connected to GOT via USB hub.
- Do not connect any device to the printer while GOT is connected to it.
- Do not connect any device other than printer to the printer unit.

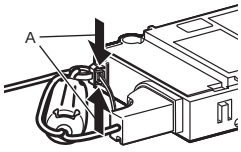
(2) Cable connection/disconnection
When connecting and disconnecting the dedicated printer connection cable, leave an interval of at least 3 seconds.

(3) Printer unit removal
To remove the printer unit, detach it from specified direction (△PULL) so as not to break the connector.

(4) Cable clamp
- Pulling out the cable clamp band
  The cable clamp band can be pulled out after cable treatment.
  Pull out the band with pressing the tab of the cable clamp outward using a driver etc.



- Removing from the printer unit
  The dedicated printer connection cable can be removed from the unit with the cable clamp attached.
  Remove the cable clamp by pressing it in both directions (arrow A).



(5) Screw of the connector holder
Do not remove the screw attached to the connector holder.
In the case the screw is removed, do not use any other screw.
Doing so may damage the unit.

8.4 Video/RGB Unit

The video/RGB unit is used to connect a video camera, personal computer, or commercially available display to a GOT.
To connect video/RGB unit, make Communication Settings.
For details of connection, refer to the following manual.

☞GOT1000 Series Connection Manual

- Video/RGB unit
  Images taken with a video camera and a personal computer display can be displayed on the GOT.
- Video input unit
  Images taken with a video camera can be displayed on the GOT.
- RGB input unit
  A personal computer display can be displayed on the GOT.
- RGB output unit
  A GOT display can be displayed on a commercially available display.

8.4.1 Video/RGB unit types

There are the following types of video/RGB units.

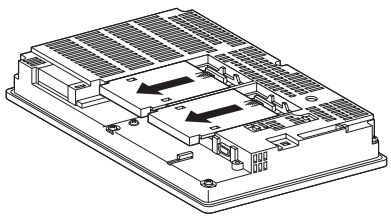
Model name	Description	
GT15V-75V4	For NTSC/PAL input 4 channels	Only for video/RGB compliant models
GT15V-75R1	For analog RGB input 1 channel	
GT15V-75V4R1	For NTSC/PAL (4ch)/analog RGB (1ch) mixed input	
GT15V-75ROUT	For analog RGB output	

8.4.2 Installing procedure

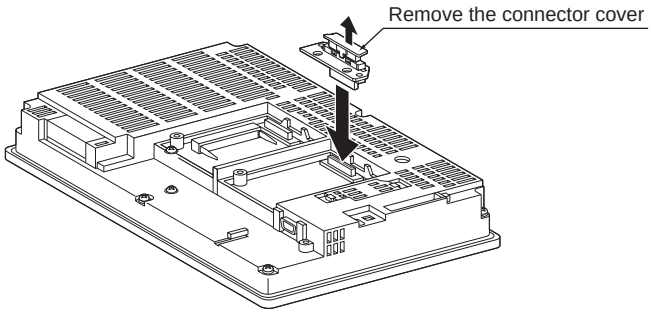
This section explains how to install a video/RGB unit on a GOT.
A video/RGB unit can also be installed together with another extension unit.
When installing a video/RGB unit together with some other extension unit, after executing the procedure in this section, refer to the following.
One video/RGB unit can be installed only in the first stage of the extension interface.

☞8.1.3 Installing multiple extension units in layers

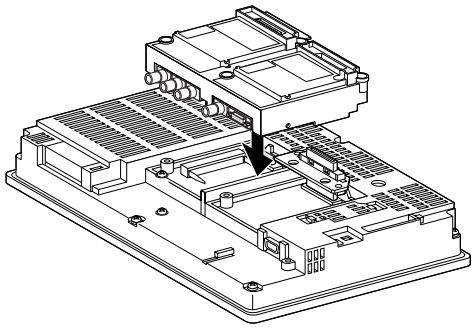
1. Power OFF the GOT.
2. Remove the two extension unit covers of the GOT rear face.



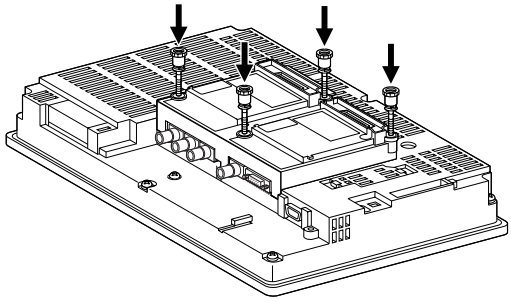
3 Install the extend interface relay board on the Extend I/F-2 side of the GOT.
After the installation, detach the connector cover from the extend interface relay board.



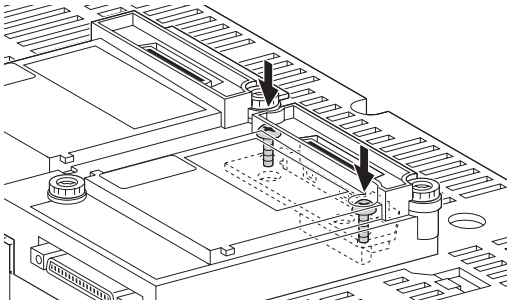
4 Install the video/RGB unit on the extension interface of the GOT rear face.
(When the extension unit is installed in GOT, remove the installed extension unit. And, do not touch the board in the GOT when install the video/RGB unit.)



5 After the installation, tighten the mounting screws (4 places) in the specified torque range (0.36 to 0.48N·m).



6 Tighten the extend interface relay board installed by the step 3 within the specified torque range (0.36 to 0.48N·m). (2 places)



Point

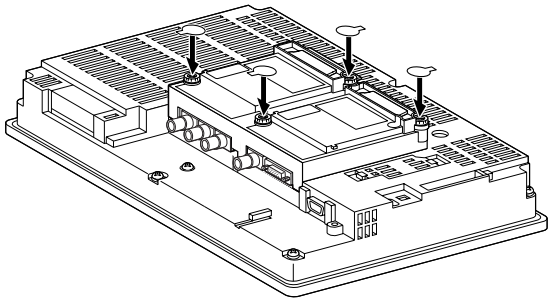
Removing the video/RGB unit

Before removing the unit, unscrew the extend interface relay board fixing screws. (☞ above 6)

7 When installing an extension unit on the unit, refer to the following.

☞ 8.1.3 Installing multiple extension units in layers

When not installing an extension unit on the outer layer, cover the top of mounting screws (4 places) with accessory stickers in order to avoid receiving static electricity.
Keep the connector cover fixed.
Keep the sticker stuck as it is.



8.5 External I/O Unit

The external I/O unit is used for connecting to an external I/O device or operation panel.
For connecting the external I/O unit, set the communication settings.
For connection details, refer to the following manual.

☞GOT1000 Series Connection Manual

8.5.1 Applicable external I/O unit

The following external I/O unit is applicable to GT15☐☐.

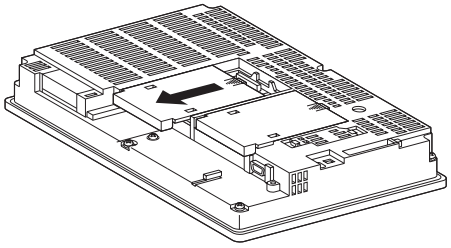
Model	Description
GT15-DIO	External I/O unit

8.5.2 Installation procedure

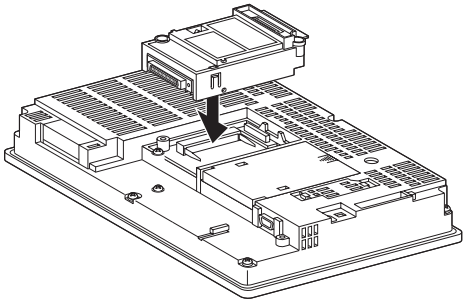
The external I/O unit can be installed on the GOT with other extension units.
For installing the external I/O unit with other extension units, refer to the following after implementing the steps described in this section.
One external I/O unit can be installed in any position (1st to 3rd stage) of the extension interface.

☞8.1.3 Installing multiple extension units in layers

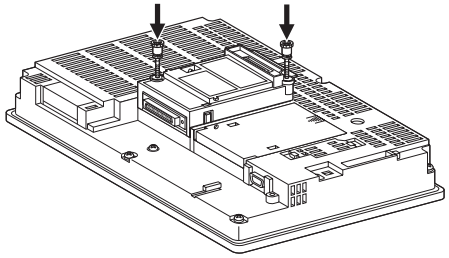
1. Turn off the GOT.
2. Remove one extension unit cover of the GOT.



3. Fit the external I/O unit in the GOT case.



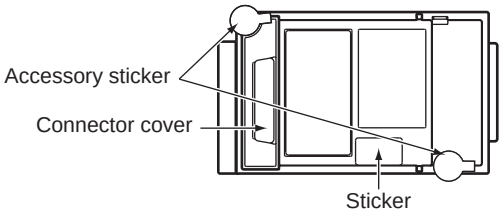
4 Tighten two external I/O unit mounting screws with a torque of 0.36 to 0.48N·m.



5 For installing an extension unit on the external I/O unit, refer to the following.

☞8.1.3 Installing multiple extension units in layers

When an extension unit is not installed on the unit, stick accessory stickers over two mounting screws so as not to damage the unit by static electricity.
Keep the connector cover and sticker fixed as shown in the following figure.



8.6 Sound Output Unit

The sound output unit is used for connecting to external speakers.
For connecting the sound output unit, set the communication settings.
For connection details, refer to the following manual.

☞GOT1000 Series Connection Manual

8.6.1 Applicable sound output unit

The following sound output unit is applicable to GT15□□.

Model	Description
GT15-SOUT	Sound output unit

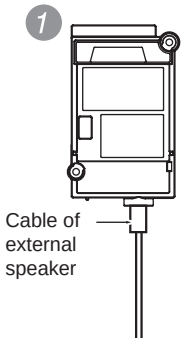
8.6.2 Installation procedure

The sound output unit can be installed on the GOT with other extension units.
For installing the sound output unit with other extension units, refer to the following after implementing the steps described in this section.
One sound output unit can be installed in any position (1st to 3rd stage) of the extension interface.

☞8.1.3 Installing multiple extension units in layers

1 Cable connection

1 Connect a cable of an external speaker to the sound output unit.



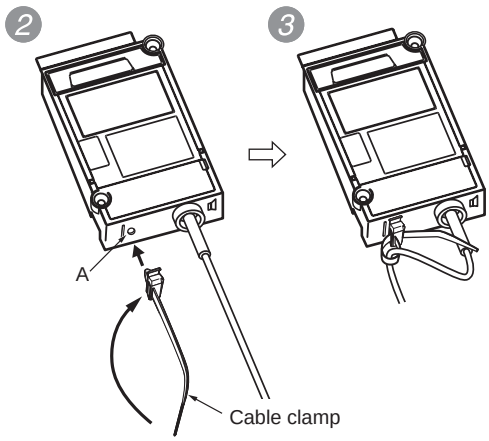
2 Attach the cable clamp to the unit.

Be sure to attach the cable clamp to section A as shown in the following figure with its band positioned outside until it clicks.

Put the band of the cable clamp through the hole of the cable clamp in the direction of the arrow.

(The RST-1NB manufactured by TAKEUCHI INDUSTRY CO., LTD. is applicable as the cable clamp.)

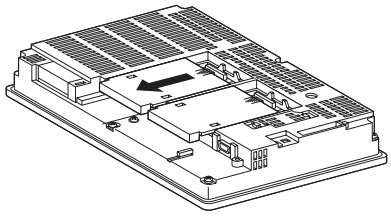
3 Put the cable of the external speaker through the looped cable clamp band, and pull the band for fixing the cable.



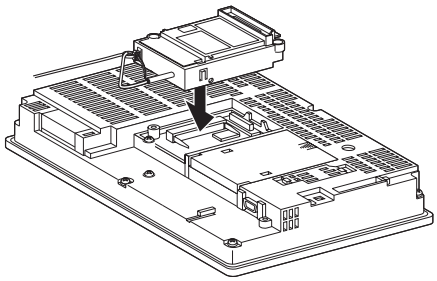
2 Unit installation

1 Turn off the GOT.

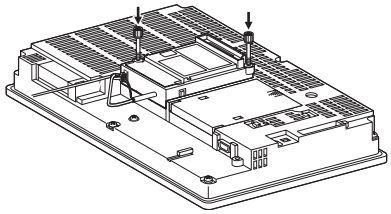
2 Remove one extension unit cover of the GOT.



3 Fit the sound output unit in the GOT case.



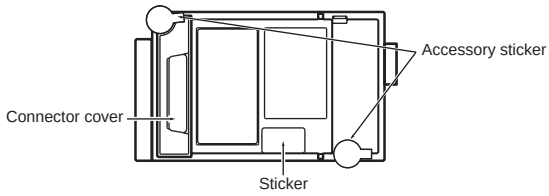
4 Tighten two sound output unit mounting screws with a torque of 0.36 to 0.48N·m.



5 When installing an extension unit on the outer layer, refer to the following.

☞ 8.1.3 Installing multiple extension units in layers

When not installing an extension unit on the outer layer, cover the top of mounting screws (4 places) with accessory stickers in order to avoid receiving static electricity.
Keep the connector cover and sticker fixed as shown in the following figure.



Point

(1) Precautions for connecting external speakers
- Do not connect or disconnect the cable of the external speaker during sound outputs.
- Do not connect any devices other than external speakers to the sound output unit.

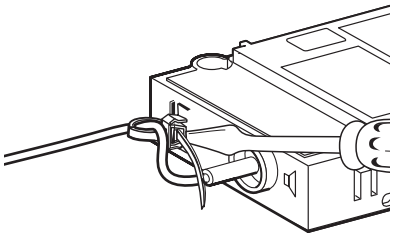
(2) Removing sound output unit

When removing the sound output unit, tilt △PULL of the unit and remove the unit so as not to break the connector.

(3) Cable clamp
- Removing cable clamp band

  The cable clamp band can be removed after the cable of the external speaker is fixed with the cable clamp.

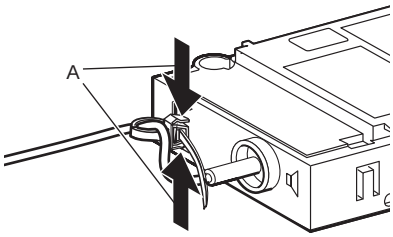
  Pull out the cable clamp band with the tab of the cable clamp pushed up using a tool, including screwdrivers.



- Removing from sound output unit

  The cable of the external speaker can be removed even though the cable is fixed with the cable clamp.

  Remove the cable clamp by pressing it in both directions (arrow A).



8.7 CF Card Unit and CF Card Extension Unit

When an additional drive is used, the CF card unit or CF card extension unit can be used as the B drive of the GOT.
The CF card extension unit is a set of the control panel side installation unit (GT15-CFEX) and the GOT side installation unit (GT15-CFEXIF).
When the CF card extension unit is used, the control panel side installation unit on the control panel has the CF card interface. Therefore, when the CF card is inserted or ejected, there is no need to open the control panel's door.
For using the CF card unit and the CF card extension unit, set the communication settings.

8.7.1 Applicable CF card unit and CF card extension unit

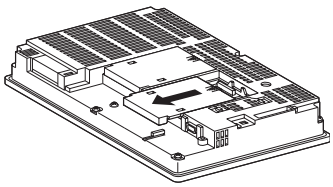
The following CF card unit and the CF card extension unit are applicable to GT15☐☐.

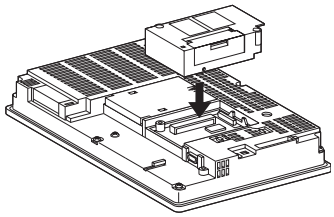
Model name	Description
GT15-CFCD	CF card unit
GT15-CFEX-C08SET	CF card extension unit

8.7.2 Installing on GOT

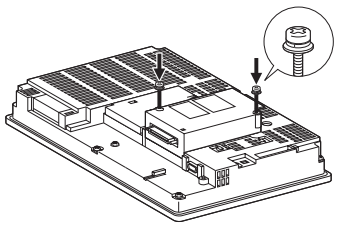
The section explains how to install the CF card unit or the CF card extension unit on the GOT.
The following is an example of installing the CF card unit.
For installing the CF card extension unit, install the GOT side installation unit on the GOT with the same procedure.

1. Power off the GOT.
2. Remove one extension unit covers of the GOT and fit the CF card unit in the GOT case.





3. Fasten the CF card unit by tightening its mounting screws (2 places) with tightening torque 0.36 to 0.48N ▪ m.



Point

Installation and removal precautions

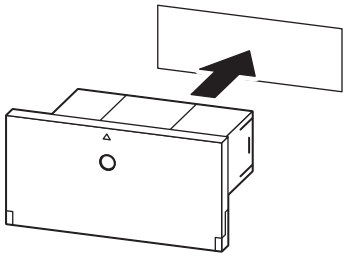
- Extension units cannot be installed on the CF card unit and the CF card extension unit.
  For installing extension units, install the CF card unit or the CF card extension unit at the last.
- When installing the CF card unit on extension interface 1 (left side), do not install more units on extension interface 2 (right side) than on extension interface 1 (left side).
  If doing so, the CF card cannot be installed or removed.
- For removing the CF card unit or the CF card extension unit, tilt PULL △ of the unit and remove the unit so as not to break the connector.
- The CF card unit cannot be used with the CF card extension unit. For details, refer to the following.

  ☞ Appendix 5 How to Choose Drive

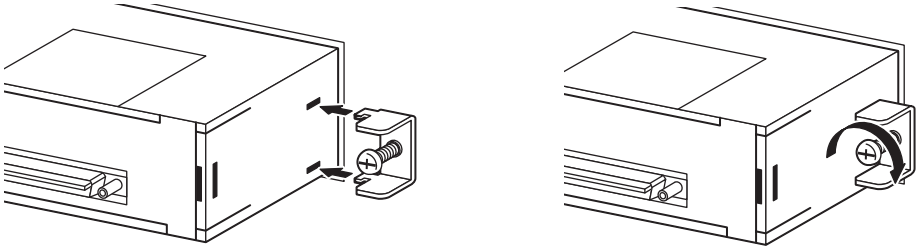
8.7.3 Installing on control panel

The following shows how to install the CF card extension unit on the control panel.

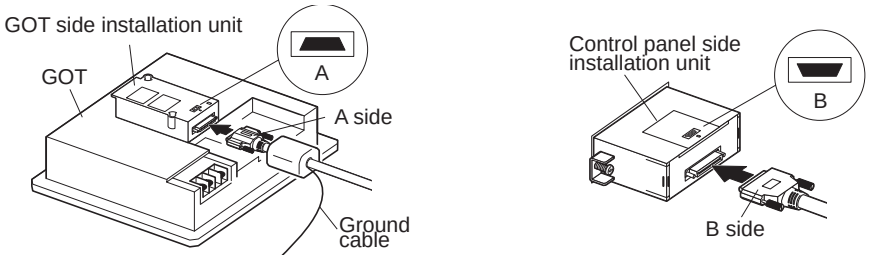
1 Insert the control panel side installation unit into the installation hole of the control panel.
For the installation hole, refer to the following.
☞ 6. INSTALLATION



2 Fix the GOT side installation unit by tightening its fixing screws (2 places) with a tightening torque of 0.36 to 0.48N.m.



3 Insert the connector with the ground cable into the GOT side installation unit, and insert the connector without the ground cable into the control panel side installation unit.
(For GT155□, before connecting the connection cable to the GOT side installation unit, connect the ground cable of the connection cable to the GOT's terminal block. Because the GOT's terminal block overlaps with the connection cable, the ground cable cannot be connected to the GOT's terminal block.)
After inserting the connectors, tighten the connection cable fixing screws.



4 Connect the ground cable of the connection cable to the FG terminal of the GOT's power.
For connecting the ground cables, refer to the following.
☞ 7.6 Grounding Extension Units

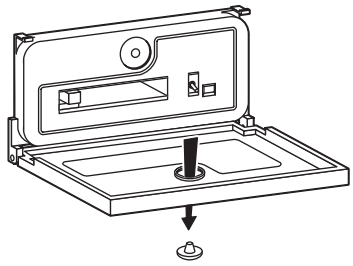
8.7.4 Protective structure for CF card extension unit

The protective structure of the outside the enclosure for the control panel side installation unit is IP65 in shipping.
When the dustproof rubber for the CF card cover is changed with the CF card cover fixing screw, the protective structure is IP67.

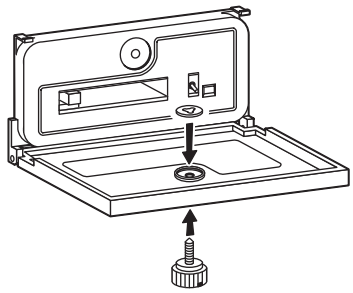
Part	Protective structure
Dustproof rubber	IP65
CF card cover fixing screw	IP67

The following shows how to install the CF card cover fixing screw.

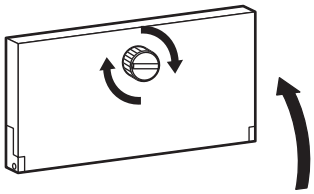
1 Open the CF card cover, and remove the dustproof rubber in the direction of the arrow.



2 Insert the CF card cover fixing screw into the hole of the CF card cover, and install the washer in the direction of the arrows.



3 Close the CF card cover, and tighten the CF card cover fixing screw with a tightening torque of 0.11 to 0.48N.m.



Point Precautions when the CF card cover is opened

The environmental protective structure of the CF card extension unit is IP2X when the CF card cover is opened.

8.8 CF Card

The CF card is used to transfer the OS or project data and to save data of the alarm history function or other functions.
Refer to the following for details

☞ 13. FILE DISPLAY AND COPY (PROGRAM/DATA CONTROL)

8.8.1 Applicable CF card

The following CF cards are applicable for GT15□□.

Mode	Description
GT05-MEM-16MC	Flash ROM 16MB
GT05-MEM-32MC	Flash ROM 32MB
GT05-MEM-64MC	Flash ROM 64MB
GT05-MEM-128MC	Flash ROM 128MB
GT05-MEM-256MC	Flash ROM 256MB
—	Commercially-available CF card *1

*1: Some models with the operations checked by our company are usable.
For the operation-checked models, refer to "List of valid devices applicable for GOT1000 series" (T10-0039) separately available.
The Technical News above is available as a reference at the Information site for Mitsubishi industrial automation products.
(MELFANSweb website: http://wwwf2.mitsubishielectric.co.jp/english/index.html)

Point

The flash PC card of the GOT-A900 series

In the GT15□□, the flash PC card for GOT-A900 series cannot be used.

Use the CF card which is described in the above.

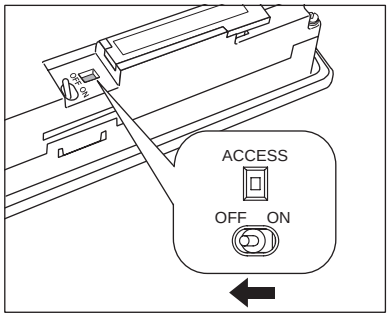
8.8.2 CF card inserting/removing method with CF card interface of GOT

Install/remove the CF card with the power supply of GOT is OFF or CF card access switch is OFF.

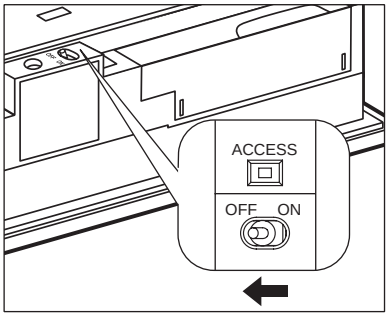
1 Installing

1. Turn the CF card access switch of the GOT off.

When using other than the GT155□

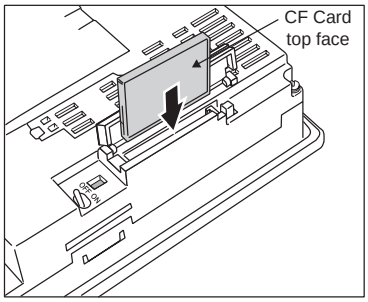


When using the GT155□

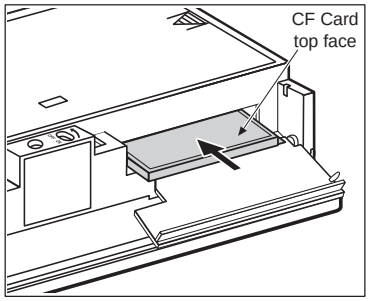


2. Open the cover of the CF card interface.
   Insert and install the CF card into the CF card interface with its front side outside.

When using other than the GT155□



When using the GT155□

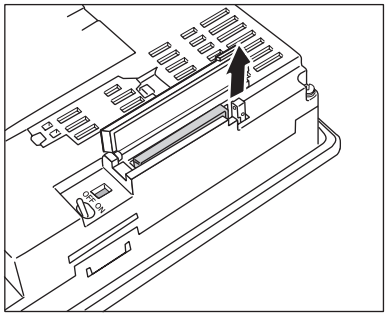


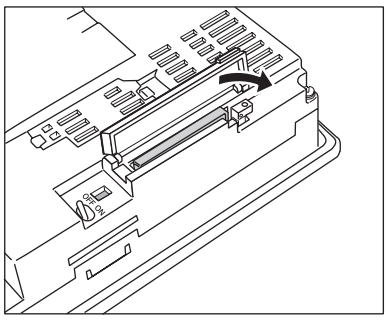
Point

CF card eject button

For the following GOTs, after installing the CF card, turn the CF card eject button to 90 degree while being pulled.

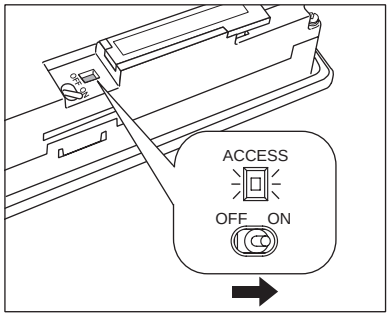
- GT1585-S, GT1575-S: Hardware version B (April, 2005) or earlier
- GT1575-V, GT1565-V: Hardware version D (April, 2005) or earlier



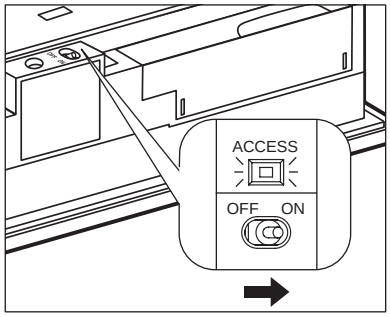


3 Close the cover of the CF card interface. Set the CF card access switch to ON.

When using other than the GT155□



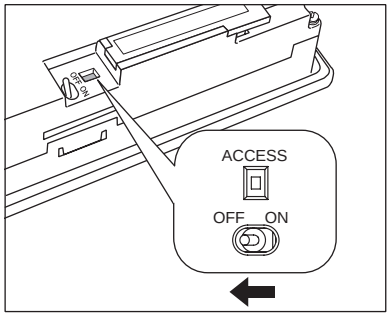
When using the GT155□



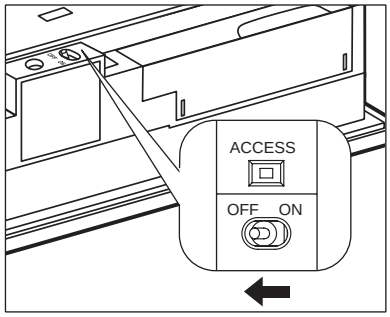
2 Removing

1 Set the CF card access switch of the GOT to OFF, and make sure that the CF card access LED turns off. (When the CF card access LED turns off, the CF card can be removead even during the GOT power on.)

When using other than the GT155□



When using the GT155□

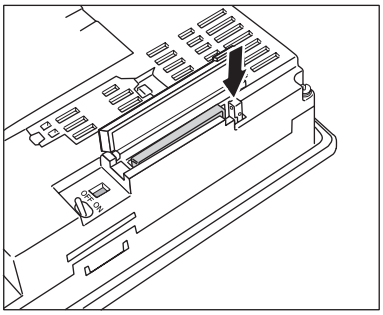


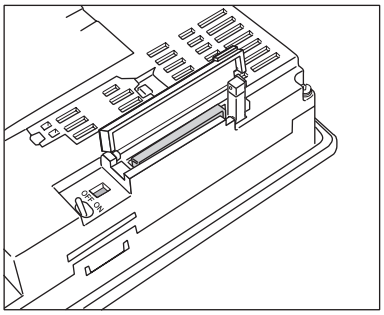
2 Open the cover of the CF card interface.

Push the CF card eject button of the GOT.

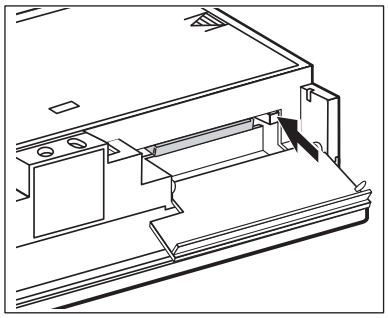
(The CF card eject button is pulled out after pushing at once.)

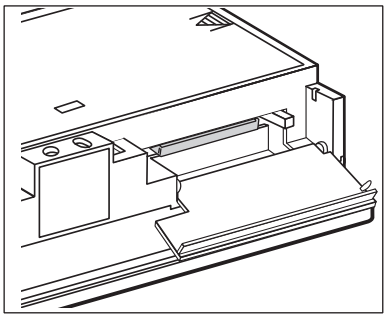
When using other than the GT155□





When using the GT155□



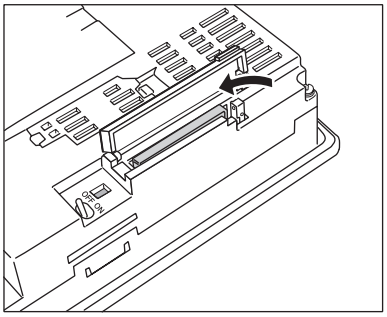


Point

CF card eject button

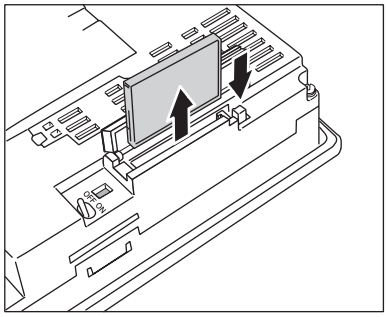
For the following GOTs, after opening the cover of the CF card interface, raise the CF card eject button.

- GT1585-S, GT1575-S: Hardware version B (April, 2005) or earlier
- GT1575-V, GT1565-V: Hardware version D (April, 2005) or earlier

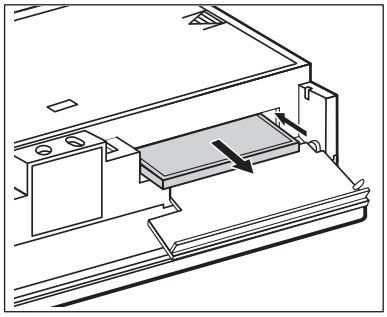


3 Push the CF card eject button of the GOT to lift the CF card and remove it.

When using other than the GT155☐



When using the GT155☐



Point

Precautions for removing the CF card

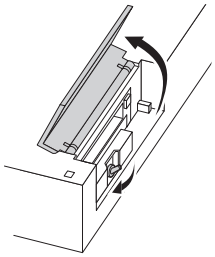
1. While the CF card access LED is on, do not install/remove the CF card or power off the GOT.
   To do so may cause data corruption or malfunction.
2. When ejecting the CF card, support it by hand since it may pop out.
   Failure to do so may cause a fall of the CF card leading to failure or damage of the card.
3. Do not install/remove the CF card while downloading the monitor data or other data by the RS-232 transmission.
   To do so may cause a faulty communication of the GT Designer2 and the data cannot be downloaded normally.

8.8.3 CF card inserting/removing method with CF card unit

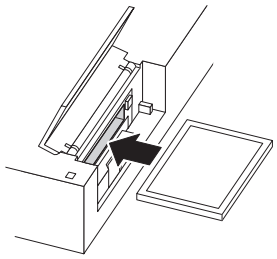
Install/remove a CF card while the GOT power or the CF card access switch is OFF.

1 Installation

1. Open the CF card cover and turn off the CF card access switch of the unit.



2. Insert the CF card into the CF card connector with the face out.

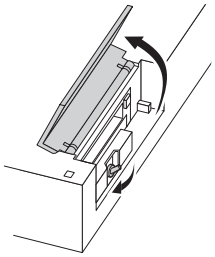


3. Turn on the CF card access switch.

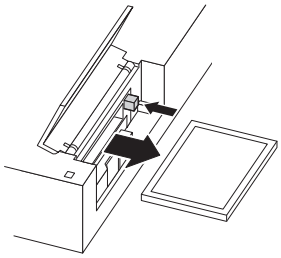
2 Removal

1 Open the CF card cover.

Turn off the CF card access switch of the unit and check that the CF card access LED turns off. (When the LED turns off, the CF card can be removed even while the GOT is on.)



2 Press the CF card eject button to pop out the CF card and remove it.



Point

Precautions for removing CF card

(1) Do not insert or eject a CF card, and do not turn off the GOT while the CF card access LED turns on.
Failure to do so might cause a data damage in the CF card and a malfunction with the CF card unit.

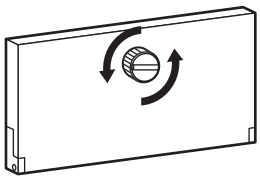
(2) When a CF card is removed from the CF card unit, support the card with the hand, because the card might pop out.
Failure to do so might cause the CF card to drop from the unit, resulting in a damage or failure of the card.

8.8.4 CF card inserting/removing method with CF card extension unit

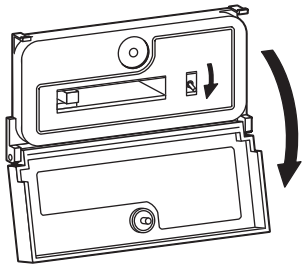
Install/remove the CF card with the power supply of GOT is OFF or CF card access switch is OFF.

1 Installation

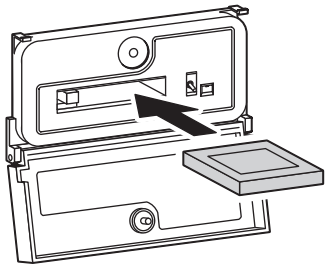
1. When the CF card cover is fixed with the CF card cover fixing screw, unscrew the screw.



2. Open the CF card cover, and turn off the CF card access switch of the unit.



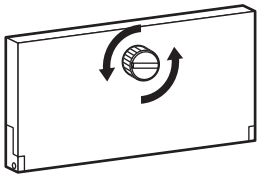
3. Insert the CF card into the CF card connector with the front side facing up.



4. Turn on the CF card access switch.

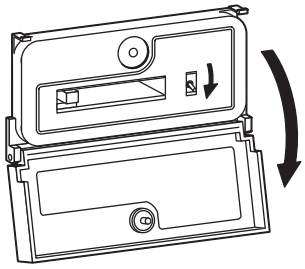
2 Removal

1 When the CF card cover is fixed with the CF card cover fixing screw, unscrew the screw.



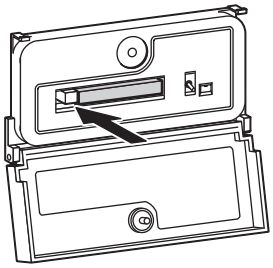
2 Open the CF card cover.

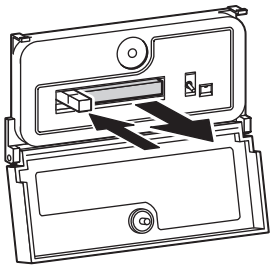
Turn off the CF card access switch and check that the CF card access LED turns off.
(The CF card can be removed when the CF card access LED turns off even though the GOT's power is on.)



3 Press the CF card eject button, and then the button pops out.

Press the button again, and then the CF card pops out. Remove the card.





Point

Precautions for removing CF card

(1) Do not insert or eject a CF card, and do not turn off the GOT while the CF card access LED turns on.
Failure to do so might cause a data damage in the CF card and a malfunction with the CF card unit.

(2) When a CF card is removed from the CF card unit, support the card with the hand, because the card might pop out.
Failure to do so might cause the CF card to drop from the unit, resulting in a damage or failure of the card.

8.9 Memory Card Adaptor

The memory card adaptor is used to convert the CF card into the memory card (Type II).
The memory card (Type II) is used to transmit the OS, project data and to save the data of alarm history function or other functions by installing it to the PC which is equipped with the CMCIA interface.
Refer to the following for the details related to CF card.

☞ 8.8 CF Card

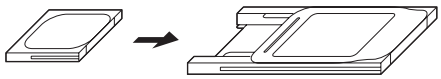
8.9.1 Applicable memory card adaptor

The following memory card adaptor is applicable for GT15□□.

Mode	Description
GT05-MEM-ADPC	Converts the CF card into a memory card

8.9.2 Installing procedure

1. Fit the memory card in the memory card adaptor.



CF card　　Memory card adaptor

8.10 Option Function Board

The optional function board is used to extend the option function and the built-in flash memory.
When the function version of the GOT to be used is D or later, the option functions operated with the GT15-FNB can be used without an option function board installed. (The latest standard monitor OS must be installed on the GOT.)
For the option functions operated with the GT15-FNB, refer to the following.

☞GOT1000 Series Extended/Option Functions Manual

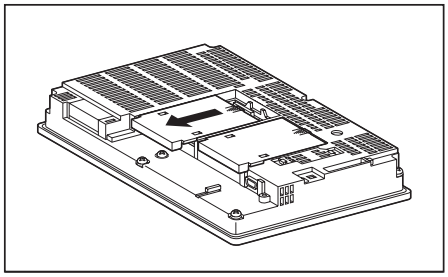
8.10.1 Applicable option function board

The following option function boards are applicable for GT15□□.

Model	Description
GT15-FNB	Option function board
GT15-QFNB	Option function board Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
GT15-QFNB16M	Option function board with add-on memory (Option function+16MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
GT15-QFNB32M	Option function board with add-on memory (Option function+32MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
GT15-QFNB48M	Option function board with add-on memory (Option function+48MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, and document display function
GT15-MESB48M	Option function board with add-on memory (Option function+48MB) Applicable to MELSEC-Q/QnA ladder monitor function, multi-channel function, document display function, and MES interface function

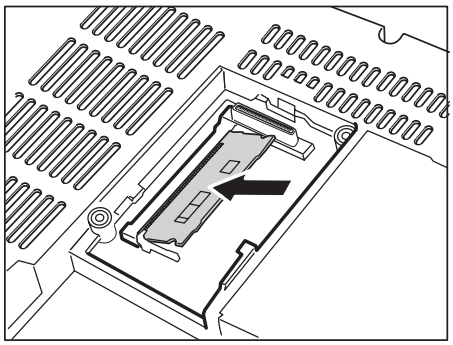
8.10.2 Installing procedure

1. Power OFF the GOT.
2. Detach the extension unit cover (I/F-1 side) of GOT rear face.
   When extention units are mounted on the GOT, remove the extention units.

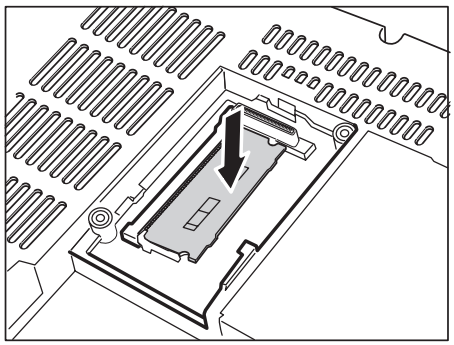


3 Insert the option function board to the option function board interface to which the positioning crenas are fitted.

For installing the option function board, do not touch a board inside the GOT.



4 Push down the option function board until it clicks.



5 After the installation of option function board, attach the extension unit cover.

For installation of extension unit, install the extension unit.

8.11 Battery

Battery is used to backup data when the power supply of GOT is OFF.
The data which can be backed-up with the battery is shown below.

- Present time (Clock data) (☞ 12.1 Time Setting and Display)
- Maintenance time notification data (☞ 16.1 Maintenance Timing Setting)

8.11.1 Applicable battery

The following battery is applicable for GT15□□.

Model	Description
GT15-BAT	Battery for backup of clock data and maintenance timing setting data.

8.11.2 Battery specifications

Item	Specifications
Type	Magnesium manganese dioxide lithium primary battery
Initial voltage	3.0V
Nominal current	1800mAh
Storage life	Approx.5 years (Operating ambient temperature of 25°C)
Total power stoppage time	Refer to Section 8.11.4 Battery life
Lithium content	0.49g
Application	For backup of clock data and maintenance timing setting data.

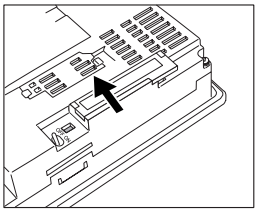
8.11.3 Battery replacement procedure

Replace battery periodically by referring to Section 8.11.4 Battery life.

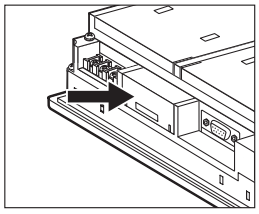
1 Keep the GOT power supply on for 10 minutes or more, and turn it off. (Executes step 2 to 6 within 5 minutes of powering the GOT power supply off.)

2 Remove the battery holder form the GOT backside.

For other than GT155□



For GT155□



3 Remove the old battery from the holder and disconnect the connector.

4 Connect the new battery to the connector.

5 Insert the battery into the holder and set it into the GOT backside.

6 Turn the GOT power supply on.

7 Check if the battery condition is normal within the utility.
Refer to the following for the details of battery status display.

☞12. CLOCK SETTINGS AND BATTERY STATUS DISPLAY (TIME SETTING AND DISPLAY)

Point

1. Precautions after battery replacement

   Make sure to turn on the GOT power supply once upon completion of battery replacement.
   Failure to do so may decrease the battery life.

2. When the 2- slot type extension unit is connected to GT156□.

   Before installing or replacing the battery, disconnect the unit.
   (When connecting or disconnecting the unit, be sure to power off the GOT and PLC.)

8.11.4 Battery life

Life span of the battery set in the GOT is shown below.

Battery life		
Operating ambient temperature of 0 to 45°C	Operating ambient temperature of 45 to 55°C	Data backup time after detection of battery voltage low*
5 years	3 years	14 days

*: In the following conditions, the data backup time is 5 minutes after the power supply is turned off.
- The battery connector is disconnected.
- The battery lead is disconnected.

Point

Battery life and replacement time

1. Battery life reference: Approx.5 years in actual use (Operating ambient temperature of 25°C)
   Battery replacement time reference: 4 to 5 years
   Calculate the natural discharge amount of the battery, as necessary.

2. Check if the battery condition is normal within the utility.
   Refer to the following for the details of battery status display.

   ☞12. CLOCK SETTINGS AND BATTERY STATUS DISPLAY (TIME SETTING AND DISPLAY)

8.12 Protective Sheet

The protection sheet is used to protect the operation surface from damage or dirt when the touch key of GOT display section is operated.

8.12.1 Applicable protective sheet

The following protective sheets are applicable for GT15□□.

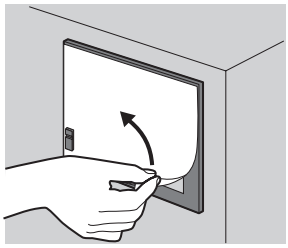
When giving priority to brightness, select the clear protective sheet; when giving priority to preventing glare, select the anti-glare protective sheet.

Product name	Model	Description	
Protective sheet	GT15-90PSCB	15" protective sheet	Clear 5 sheets
	GT15-90PSGB		Antiglare 5 sheets
	GT15-90PSCW*1		Clear (Frame: White) 5 sheets
	GT15-90PSGW*1		Antiglare (Frame: White) 5 sheets
	GT15-80PSCB	Protection sheet for 12.1"	Clear 5 sheets
	GT15-80PSGB		Antiglare 5 sheets
	GT15-80PSCW*1		Clear (Frame: White) 5 sheets
	GT15-80PSGW*1		Antiglare (Frame: White) 5 sheets
	GT15-70PSCB	Protection sheet for 10.4"	Clear 5 sheets
	GT15-70PSGB		Antiglare 5 sheets
	GT15-70PSCW*1		Clear (Frame: White) 5 sheets
	GT15-70PSGW*1		Antiglare (Frame: White) 5 sheets
	GT15-60PSCB	Protection sheet for 8.4"	Clear 5 sheets
	GT15-60PSGB		Antiglare 5 sheets
	GT15-60PSCW*1		Clear (Frame: White) 5 sheets
	GT15-60PSGW*1		Antiglare (Frame: White) 5 sheets
	GT15-50PSCB	5.7" protective sheet	Clear 5 sheets
	GT15-50PSGB		Antiglare 5 sheets
	GT15-50PSCW*1		Clear (Frame: white) 5 sheets
	GT15-50PSGW*1		Antiglare (Frame: white) 5 sheets

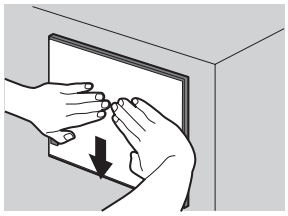
*1 Because the frame section is white, use this when making the GOT front face (other than the display section) white.

8.12.2 Installing procedure

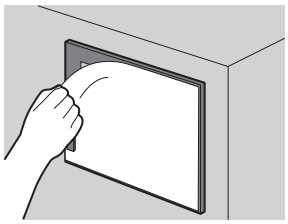
1 Remove the old protective sheet from the GOT, and clean the GOT surface.



2 Peel the release paper from the back of the new protective sheet, and attach its adhesive side to the GOT display section.
When attaching the protective sheet, make sure to fit it on the display section closely without leaving any clearance between them.



3 Peel the protective film off the protective sheet.



Remark

Replacement time of protective sheet

Check the status of the protection sheet visually by to the daily inspection. The visibility becomes worse when there is too much dirt and cracks, causing malfunction. Proceeds replacement promptly.

8.13 Protective cover for oil

Use of the protective cover for oil improves waterproof property, oil resistance, and chemical resistance of the GOT.

8.13.1 Applicable protective cover for oil

The following protective covers for oil are applicable to the GT15□□.

Product name	Model	Description
Protective cover for oil	GT05-90PCO	For 15" GOT
	GT05-80PCO	For 12.1" GOT
	GT05-70PCO	For 10.4" GOT
	GT05-60PCO	For 8.4" GOT
	GT05-50PCO	For 5.7" GOT

8.13.2 Installation procedure

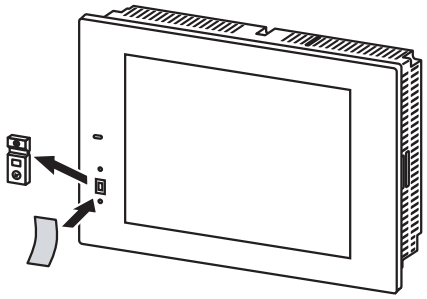
Point

Before attaching protective cover for oil

For attaching the protective cover for oil to the GOT already mounted on the control panel, follow the procedures as below.

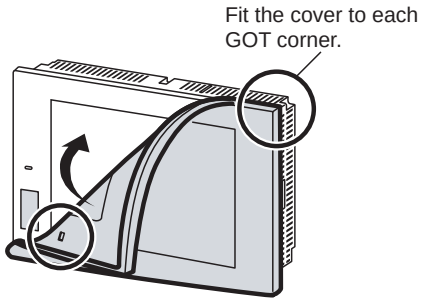
- Remove the GOT from the control panel. Make sure to externally shut off all phases of the power supply and remove all cables from the GOT in advance.
- Clean dirt off surfaces of the GOT and control panel.

1. When the USB environmental protection cover is installed on the GOT, remove the cover.
2. After removing the cover, put the USB connector protective sticker on the USB connector.



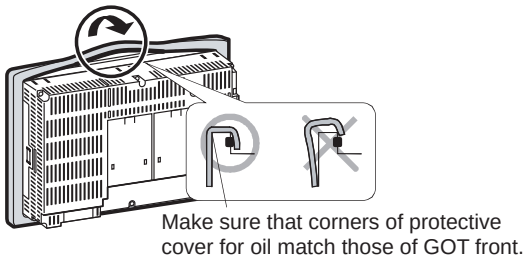
3 Check that the rubber packing is installed on the GOT rear face, and then fit the protective cover for oil to each corner of the GOT front face.

Position the POWER LED frame of the cover to the POWER LED on the GOT front face.



4 Spread the protective cover for oil so that it covers the rubber packing part on the GOT rear face.

For keeping liquids and others out of the control panel, make sure that the rubber packing part is completely covered.

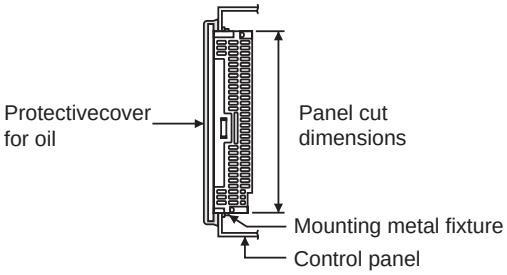


5 Mount the GOT onto the control panel.

When the control panel is dirty, clean the control panel.

The panel cutting dimensions and mounting screw tightening torque with the protective cover for oil are the same as those without the cover.

Mount the GOT onto the control panel by referring to GT15 User's manual.



Point

Precautions for protective cover for oil

- The protective cover for oil is a consumable product.
  Check the cover for scratch, damage or dirt at regular intervals, and replace with new one if necessary.
- Do not push the protective cover for oil with pointed tools, including mechanical pencils and screwdrivers.
  Doing so causes scratches and damages of the cover.
- Do not clean the protective cover for oil with bleaches, thinners, organic solvents, corrosive chemicals, and others. Doing so causes changes in shape and color of the cover.
- When the protective cover for oil is attached to the GOT, do not stretch and bend the cover too much.
  Doing so may cause a separation between the sheet and rubber.
- Do not place or use the protective cover for oil in direct sunshine.
- When the protective cover for oil gets dusts, wipe the dusts off with a damp cloth.
- When the protective cover for oil is used, the USB connector on the GOT front face cannot be used.
- When the protective cover for oil is used, the human sensor does not correctly operate.
  Disable the human sensor with the utility.
  For the human sensor setting, refer to GT15 User's Manual.

☞ 11.1.3 Display setting operations

8.14 USB Environmental Protection Cover

The USB environment cover protects the USB connector on the front face of GOT from dust, water, and oil.
The GOT is installed with the USB environment cover at factory shipment.
Replace when damage and deterioration are caused.

8.14.1 Applicable USB environmental protecton cover

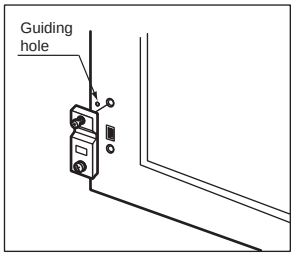
The following USB environmental protection cover is applicable for GT15□□.

Model	Description
GT15-UCOV	Environmental cover for USB interface on the GOT main unit front side (For complying IP67) (For 15", 12.1", 10.4", 8.4")
GT11-50UCOV	Environmental cover for USB interface on the GOT main unit front side (For complying IP67) (For 5.7")

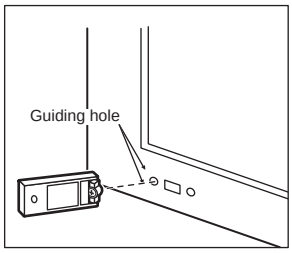
8.14.2 Installing procedure

1 Fix the USB environmental protection cover to the GOT by tightening its upper fixing screw within the specified torque range (0.36 to 0.48 N·m). (It is advisable to set the USB environmental protection cover along a guiding hole which is provided in the GOT, as it will make the installation easier.)

For other than GT155□

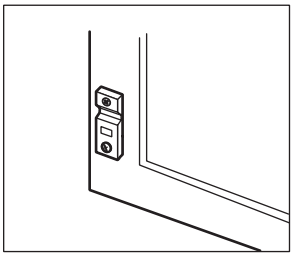


For GT155□

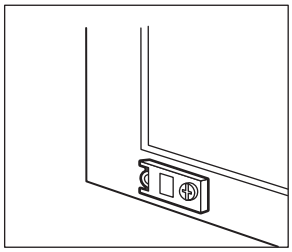


2 When the USB interface is not used, also tighten the lower fixing screw of the USB environmental protection cover within the specified torque range (0.36 to 0.48 N·m). (IP67 compliant)

For other than GT155□

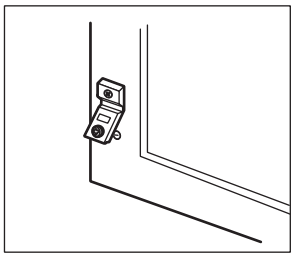


For GT155□

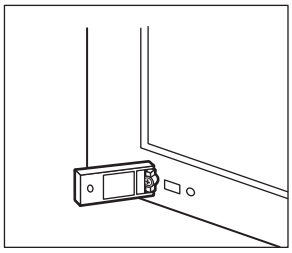


3 When the USB interface is used, remove the lower fixing screw of the USB environmental protection cover, and connect the USB cable. (IP67 incompliant)

For other than GT155□



For GT155□



Point

Precautions when the USB environment cover is opened

Environmental protective structure of USB interface is "IP2X" when the USB environmental cover is opened.

8.15 Stand

Stand is used to fix the GOT to standing status in order to debug the monitor screen data easily.

8.15.1 Applicable stand

The following stand is applicable for GT15□□.

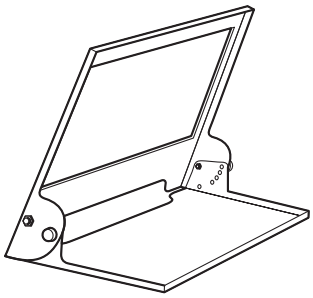
Product name	Model	Description
Stand	GT15-90STAND	Stand for 15"
	GT15-80STAND	Stand for 12.1"
	GT15-70STAND	Stand for 8.4"/10.4"
	GT05-50STAND	Stand for 5.7"

8.15.2 Installing procedure

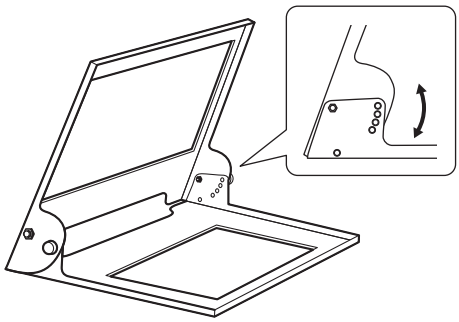
(1) GT15-90STAND, GT15-80STAND, GT15-70STAND

1. Set the stand so that the front side of the GOT to be mounted faces the front.
   For GT15-70STAND, the surface to be used to set the GOT changes according to the GOT mounted.
2. Adjust the mounting angle of GOT with the angle adjusting screw of the stand.
3. Put the GOT into the Stand from the front side and fix it using the fixtures.
   For the GOT mounting method, refer to the following.

☞ 6.5 Installation Procedure



For GT15-90 STAND,GT15-80 STAND

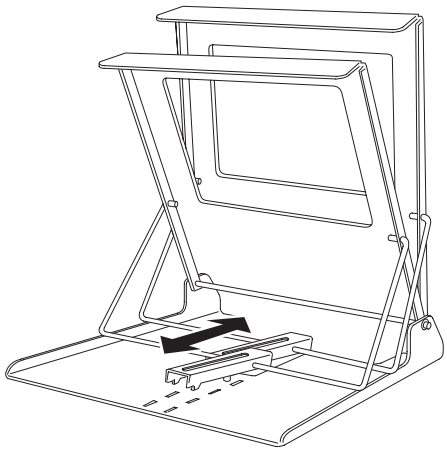


For GT15-70 STAND

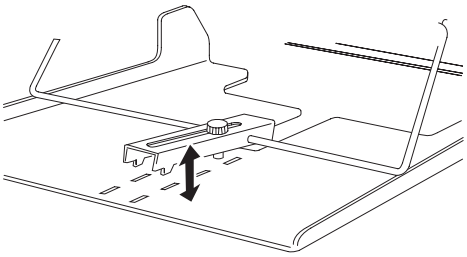
(2) GT05-50STAND

1 Determine the angle for installing the GOT.

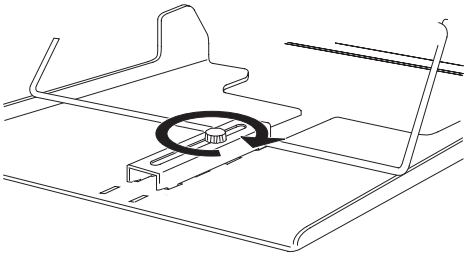
Slide the angle adjustment fitting as shown below to determine the angle.
The angle can be adjusted to 75°, 65°, 55° or 45°.
When installing multiple units to the GOT, use the stand with 75 or 65 degrees for securing lead-in allowances for cables at the bottom of the GOT.



2 Once the angle is determined, insert the angle adjustment fitting's fixing hook into the hook insertion section on the bottom of the stand.



3 Securely tighten the fixing screw.



4 Insert the GOT from the front of Stand and install it to Stand.
Refer to the GT15 User's Manual for details on installing the GOT.

5 After the installation, perform wiring, etc.

8.16 Attachment

The attachment is used to replace A960GOT, AC97□GOT to GT156□ (8.4").
If use attachment when replace A960GOT or AC97□GOT to GT156□, there is no need of additional processing as mounting hole of the inside control panel etc. which is used for A960GOT, A97□GOT.

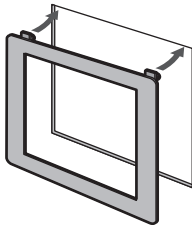
8.16.1 Applicable attachment

The following attachments are applicable for GT156□.

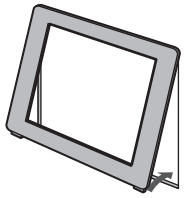
Model	Description	
GT15-60ATT-96	Attachment for 8.4"	A960GOT→GT156□
GT15-70ATT-97		A97□GOT→GT156□

8.16.2 Installing procedure

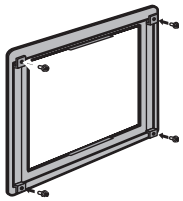
1 Hang the two upper hooks on the upper part over the mounting holes in the control panel.



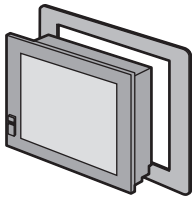
2 While lifting the attachment upward, hang the two lower hooks on the lower part of the control panel.



3 Fix the attachment to the control panel with four clamp screws in the torque range of 0.82 to 1.10N·m.



4 Place the GOT into the attachment from the front, and fix it by tightening the mounting screws included with the GOT in the torque range of 0.36 to 0.48N·m.



Point

Precautions when the attachment is installed

- The attachment can be used when the mounting panel thickness is 2 to 3mm. If the installation panel thickness exceeds 3mm, the GOT cannot be replaced by using the attachment.
- Replacing GOT with the attachment does not compliant with the standard IP65, IP67, NEMA4 of the waterproof and dustproof.

8.17 Multi-Color Display Board

The multi-color display board is used when supporting 65536 display colors.
Depending on the function version of the GOT to be used, 65536 colors are available without the multi-color display board.
For GOTs requiring installation of the multi-color display board, refer to the following.

☞ 3.2 Performance Specifications

8.17.1 Applicable multi-color display board

The following multi-color display board is applicable for GT15□□.

Model	Description
GT15-XHNB	Multi-color display board for XGA (For 65536-color display)
	Multi-color display board for SVGA/VGA (For 65536-color display)*1
GT15-VHNB	Multi-color display board for SVGA/VGA (For 65536-color display)

*1: To use it for a SVGA or VGA GOT, install the following OS to the GOT.

(Cannot be used for a SVGA or VGA GOT without installing the OS.)

BootOS Ver. 02.01.00.E or later

Standard monitor OS: Ver. 02.01.00 or later

For how to install the OS, refer to GT Designer2 Version□ Basic Operation/Data Transfer Manual.

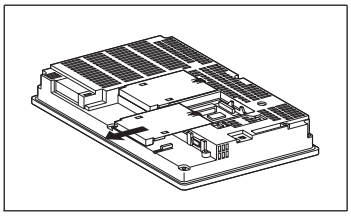
Point

When using GT1575-VN, GT1572-VN, GT1562-VN

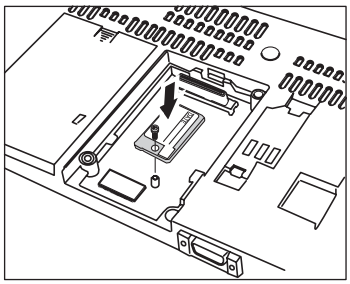
For GT1575-VN, GT1572-VN and GT1562-VN, 65536 color display is not supported even with the multi-color display board installed.

8.17.2 Installing procedure

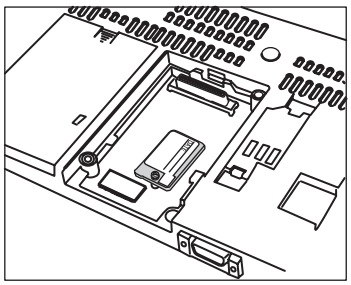
1. Power OFF the GOT.
2. Remove the extension unit cover (I/F-2 side) of GOT rear face.



3. Install the multi-color display board in the multi-color display board interface.
   (When the extension unit is installed in GOT, remove the installed extension unit. And, do not touch the board in the GOT when install the multi-color display board.)



4. After the installation, tighten a fixing screw within the specified torque range (0.25 to 0.35N·m).



9. UTILITY FUNCTION

Utility is a function, which carries out connection of GOT and controller, screen display and operation method settings, program/data control and self-check etc.

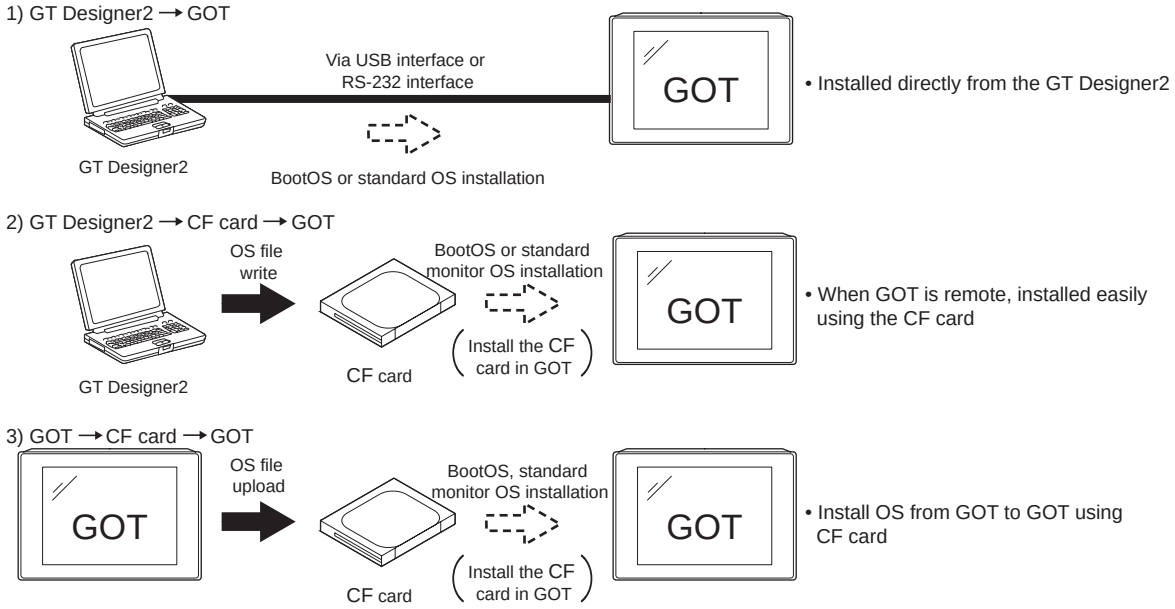
Refer to the following for the utility function list.

☞ 9.3 Utility Display

9.1 Utility Execution

For utility execution, utility has to be displayed by installing BootOS and standard monitor OS in the C drive (built in flash memory).

There are following three types for the installing BootOS and standard monitor OS methods.



Refer to the following for the installation which uses GT Designer2.

☞ GT Designer2 Version☐ Basic Operation/Data Transfer Manual

Refer to the following for the installation which uses GOT.

☞ 18. INSTALLATION OF COREOS, BOOTOS AND STANDARD MONITOR OS

9.2 Utility Function List

The items in the following list can be set/operated on the utility screens.

Item		Functions overview	Reference
Communication setting		Assigning channel numbers and communication drivers to communication interfaces.	10
	Detail settings	Setting communication parameters	
		Setting or deleting sequence program protection key words, canceling sequence program protection status (When connecting to FX series CPU)	
GOT setup	Display	Setting the startup screen display time and screen saving time	11.1
		Setting the backlight to ON or OFF during screen saving	
		Switching message languages	
		Setting the battery alarm display to ON or OFF	
		Setting the black and white inversion display to ON or OFF (For GT15, applicable to only GT1550-Q)	
		Setting the human sensor (Applicable to only GT1595-X, GT1585V-S, and GT1585-S)	
		Adjusting brightness and contrast	11.2
	Operation	Setting the buzzer volume and window move buzzer	11.3
		Setting the key sensitivity and key reaction speed	
		Setting the touch detection mode (Applicable to only GT1595-X)	
		Changing security levels	11.4
		Setting the utility call keys	11.5
		Adjusting the touch panel (Applicable to only GT1595-X)	11.6
	Q/QnA ladder monitor	Setting the data storage location for the MELSEC-Q/QnA ladder monitor function.(Inapplicable to GT1555-Q and GT1550-Q)	11.7
	Transparent mode settings	Setting the channel No. to be used for the communication for the FA transparent function	11.8
	Video/RGB Setting	Setting the video display and RGB display (Applicable to only GT1585V-S and GT1575V-S)	11.11
	Backup/ restoration setting	Setting the storage locations for backup data and backup settings, and setting the maximum number of backup data	11.12
		Setting the trigger backup	11.13
Time setting & display		Selecting a base clock	12
		Displaying and setting the clock current time	
		Displaying the battery status	

(Continued to next page)

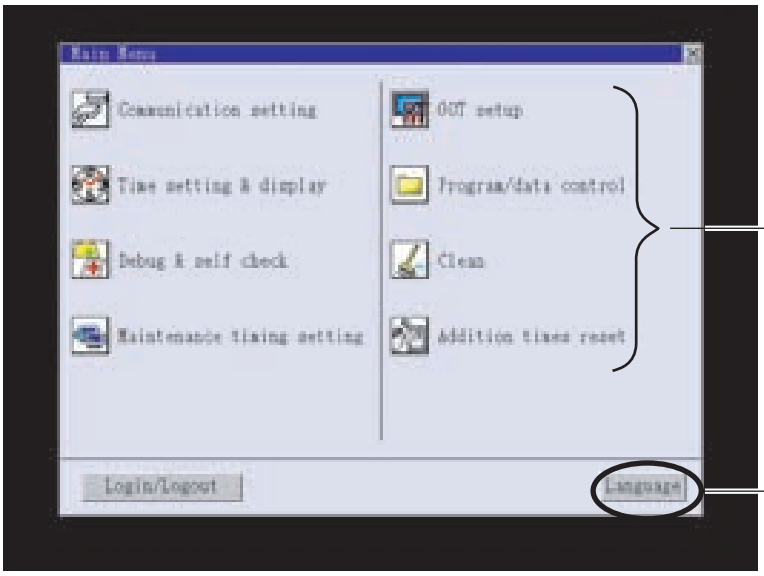
Item		Functions overview	Reference
Program/ data control	OS information	Installing or uploading OS, displaying OS property, checking OS data	13.2
	Project Information	Downloading/uploading/deleting/copying project files, displaying project file property, checking project file data	13.3
	Alarm information	Deleting or copying alarm log files	13.4
		Converting alarm log files in G1A format → CSV/TXT format	
		Displaying graphs of alarm log files	
	Advanced Recipe information	Converting advanced recipe files in G1P format → CSV/TXT format Deleting/copying/moving advanced recipe files, creating a new advanced recipe file Deleting or moving advanced recipe folders, changing advanced recipe folder names, creating a new advanced recipe folder Writing/reading/matching record data and deleting device values with the advanced recipe record list	13.7
	Logging information	Converting logging files in G1L format → CSV/TXT format	13.8
		Deleting/copying/moving logging files, changing logging file names Deleting logging folders, creating a new logging folder	
	Operation log information	Converting operation log files in G1O format → CSV/TXT format	13.11
		Deleting/copying/moving operation log files, changing operation log file names Deleting operation log folders, creating a new operation log folder	
	Hard copy information	Deleting/copying hard copy files, changing hard copy file names	13.5
	Memory card format	Formatting memory cards	13.6
	Memory Information	Displaying the available memory of the GOT	13.9
	Special data information	Deleting or checking special data files Deleting special data folders Downloading special data stored in the A drive (Standard CF card) or B drive (Extended memory card) to the C drive (Built-in flash memory)	13.10
	GOT data package acquisition	Copying the OS, special data, and project data to a memory card	13.12

(Continued to next page)

Item		Functions overview	Reference
Debug & self check	Debug	Ladder monitor.(Inapplicable to GT1555-Q and GT1550-Q)	14.1
		System monitor	
		A List editor	
		FX list editor	
		Intelligent module monitor (Inapplicable to GT1555-Q and GT1550-Q)	
		Network monitor	
		Motion monitor for Q series motion controller CPU	
		Servo amplifier monitor	
		CNC monitor (Applicable to only GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, and GT1575-S)	
		Backup/restoration	
		CNC data I/O (Applicable to only GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, and GT1575-S)	
		SFC monitor(Inapplicable to GT1555-Q and GT1550-Q)	
	Self check	Memory check	14.3
		Drawing check	14.4
		Font check	14.5
		Touch panel check	14.6
		I/O check	14.7
		Network unit status display	14.8
	System alarm display	Displaying or resetting GOT errors Displaying CPU errors and network errors	14.9
	GOT start time	Displaying the GOT start date and time, current time, and accumulated operating hours	14.10
	Operator info. management	Adding/editing/deleting operator information, changing passwords, Setting the automatic logout time and password expiration date	14.11
Clean		Displaying the screen for cleaning the display	15.
Maintenance timing setting		Setting the maintenance notification times for the backlight and display Setting the number of maintenance notifications for touch keys and the built-in flash memory	16.
Addition times reset		Resetting accumulated hours and counts for maintenance time notifications	17.

9.3 Utility Display

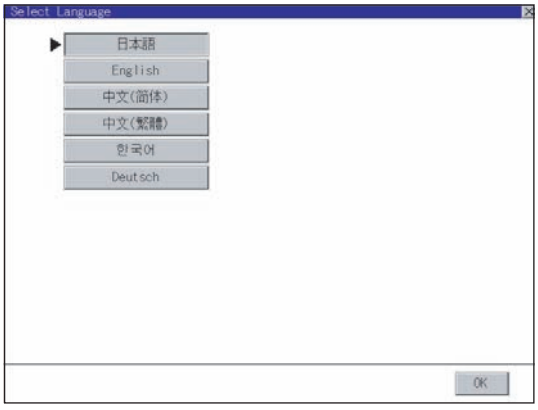
To display setting screens fot each utility, the main menu has to be displayed first.



(1) Main menu
The menu items that can be set at the GOT utility are displayed.
Touching a menu item in the main menu will display the setting screen or following selection screen for the item.
In this manual, with a few special exceptions, explanations are given primarily using the GT1575-V screens.

(2) System message switch button
This button switches the language used for the utility or system alarms.

When touching the Language button, the Select Language screen is displayed.



1 Touch the button of a language to be displayed and then OK button, and the language is selected. *1
(The ▶ mark moves.)

2 Touching the [X] button restarts the GOT and the language on the utility is switched to the selected one.

*1: Only selectable languages are displayed.
The selectable languages differ depending on the fonts installed in the GOT.
For details of the fonts, refer to the following manual.
GT Designer2 Version□ Screen Design Manual (2.3 Specifications of Applicable Characters)

Point

When starting the GOT without selecting any language or the selected language and the installed fonts are not matched

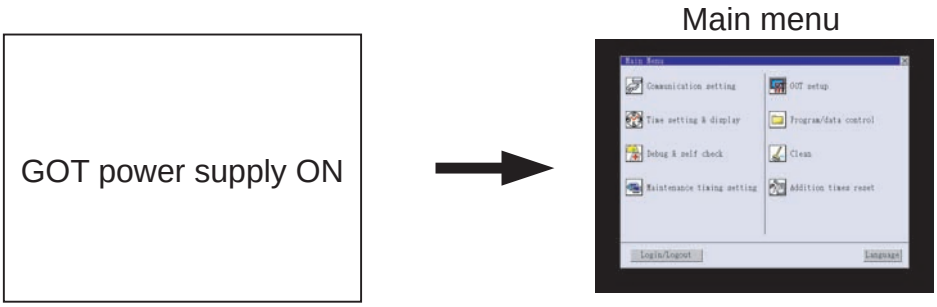
The following screen will be displayed.
Touching the button of a desired language restarts the GOT and the language is switched to the selected one.



9.3.1 Display operation of main menu

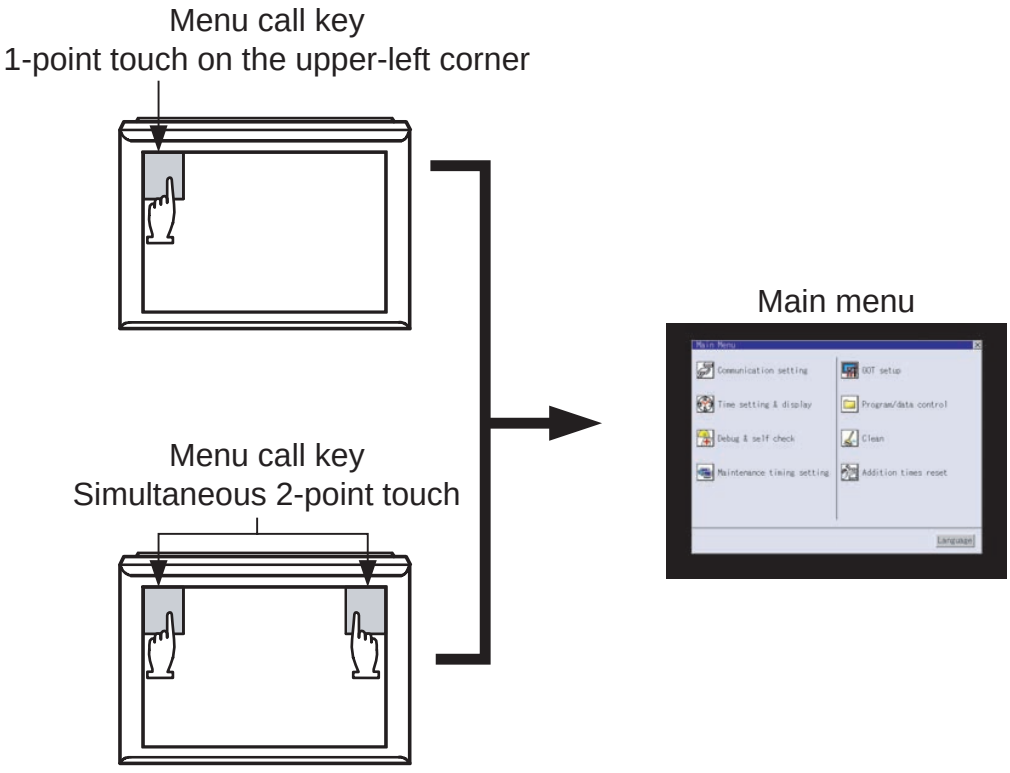
The following three types of operation can display the main menu.
(Display the main menu after installing the basic OS from GT Designer2 to the GOT built in flash memory.)

(1) When project data is undownloaded
If the power supply of GOT turns ON, the main menu is displayed automatically after title display.



(2) When touching menu call key
If you touch the menu call key while user-created screen is displayed, the main menu is displayed.
The menu call key can be set by the GOT utility or GT Designer2.
(The menu call key is set in the position as described below at factory shipment.)

Model name	Default setting at factory shipment
GT1595	1-point press on the GOT screen upper left corner
GT1585, GT157□, GT156□, GT155□	Simultaneous 2-point presses on the GOT screen upper-right and left corners

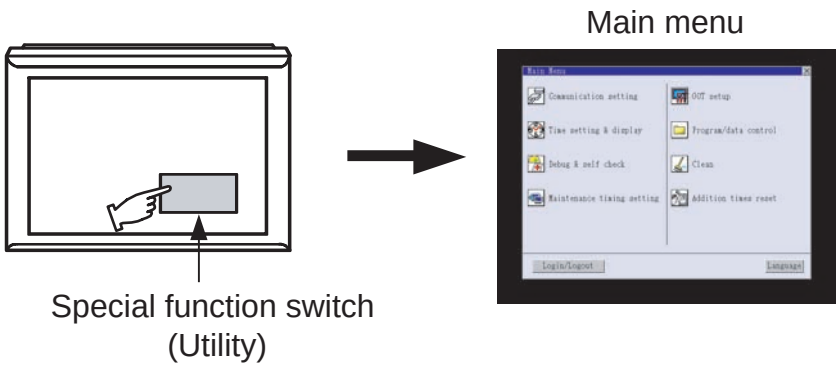


Point

(1) Prohibited simultaneous 2-point presses on the GT1595-X
In the case of using a GT1595-X, do not touch 2 points or more on the GOT screen simultaneously.
Touching 2 points or more simultaneously may activate a part other than the touched point.

(2) When setting menu call key to 1-point
When having set [Pressing time] of the menu call key setting screen to other than "0 (s)", keep pressing the touch panel for the period set to [Pressing time] or more before leaving the finger from the touch panel.
For menu call key setting, refer to the following.
☞ 11.5 Utility Call Key Setting

(3) When touching special function switch (utility)
If you touch the special function switch (utility) while user-created screen is displayed, the main menu is displayed.
The special function switch (utility) can be set as a touch switch that is displayed on a user-created screen by GT Designer2.



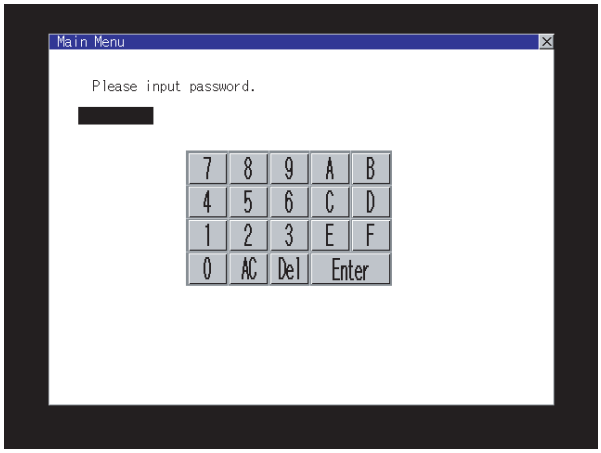
For the details of the special function switch, refer to the following.

☞ GT Designer2 Version□ Screen Design Manual

Remark

Locking the utility display by password

When you try to display the utility main menu while the password is set to the GOT by GT Designer2, the display for password input will be appeared.
(The password setting of GT Designer2 is in the common menu.)



When the password is not matched, displays the error message.



When touching [OK], the screen returns to the monitor screen.

(1) Input operation of password

1)Input the password after touching [0] to [9], [A] to [F] key.

2)Define the password by touching [Enter] key, after password input.

3)To correct the input character, touch [Del] key to delete the correcting character and reinput/retype the new character.

(2) Password input cancel operation

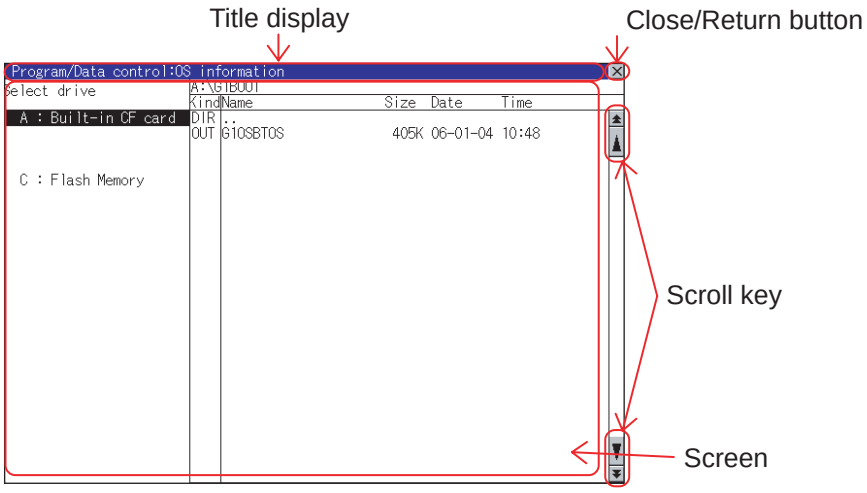
When [×] button is touched, it returns to the monitor screen.

Refer to the following for the details related to the password setting.

☞ GT Designer2 Version□ Screen Design Manual

9.3.2 Utility basic configuration

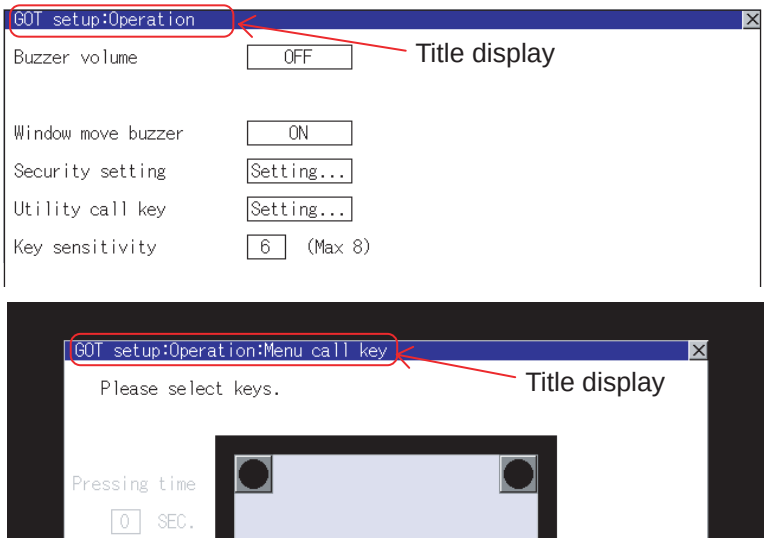
The basic configuration of utility is as follows.



(1) Title display

The screen title name is displayed in title display part.

As the screen is composed of multiple layers, the title including these layers is displayed.



(2) Close/Return button

When a middle screen of the layers is displayed, if the ☒ (Close/return) button in the right corner of screen is touched, returns to the previous screen.

If this button is touched when directly displayed from monitor screen, the screen is closed and returns to monitor screen.

(3) Scroll button

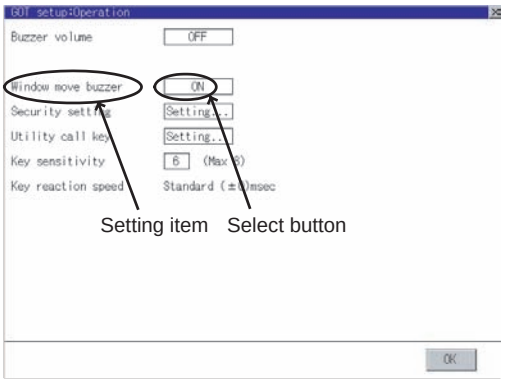
For screens in which the content does not fit on one screen page, there is a right or down scroll button on the screen.

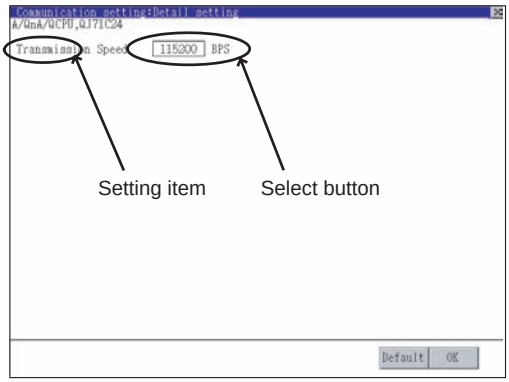
▲ ▼ ◀ ▶ Scroll one line/column

⏫ ⏬ ⏪ ⏩ Scroll window

9.3.3 Basic operation of settings change

1 Change of setting value





1 Touch the select button (setting point) on the screen.
According to the setting item, the button requires selecting setting value, inputting value or displaying other setting screen.

- ON Key : It is a key for selecting the setting value. Repeats with each touch ON ⇄ OFF .
- Numerical Key : It is a key for inputting the numerical value. It displays the keyboard on the bottom of the screen when touched.

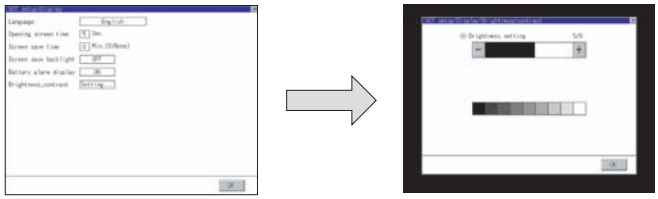
In the above mentioned screen example, there is no setting item which displays the keyboard. For the operation of keyboard refer to the next page.



Touching Enter confirms the numerical input.
When the setting range exists it repeats the numerical without displaying keyboard.

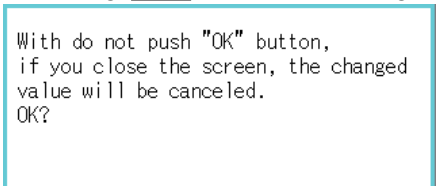
Example: 4800bps → 9600bps → 19200bps

- Setting... Key: It shifts to the setting screen of each setting item when touched. (Displays the another setting screen.)



2 Setting contents are reflected if OK button is touched.

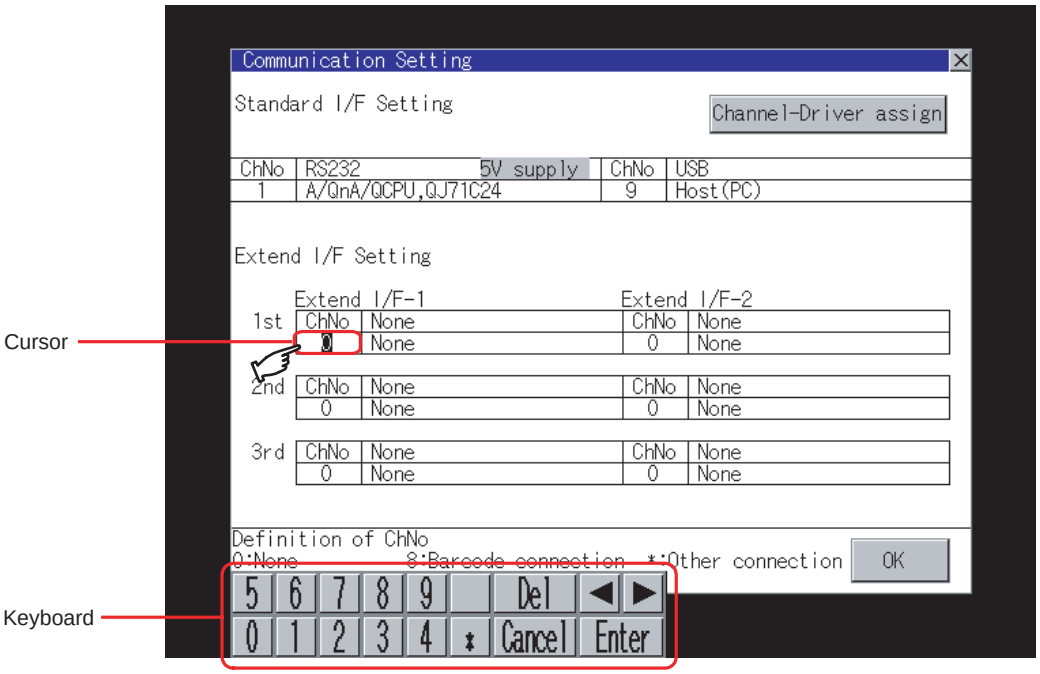
3 If ☒ touch button without touching OK button, the dialogue mentioned below is displayed.



2 Keyboard operation

1 Touch the numerical value to be changed.

2 Keyboard for numerical input is displayed and cursor is displayed simultaneously.
The key board display position chanegs by the position of numerical value touched.
(At the time of numerical input, displayed in the position which will not interrupt the inputting.)



3 Input numeric with keyboard.

- 0 to 9 Key : Input the numeric.
- Enter Key : Touching the Enter key completes numeric input and closes the keyboard.
- Cancel Key : Touching the Cancel key cancels numeric input and closes the keyboard.
- ◀ ▶ Key : Moves the cursor to the right or left side.
  Available only if any selectable item is at the right/left side of the cursor.
- Del Key : Del key is used when canceling the input by 1 character.
- * key and the key which is not mentioned do not function.

4 If Enter key is touched, numeric input is completed and keyboard is closed.

10. COMMUNICATION INTERFACE SETTING (COMMUNICATION SETTING)

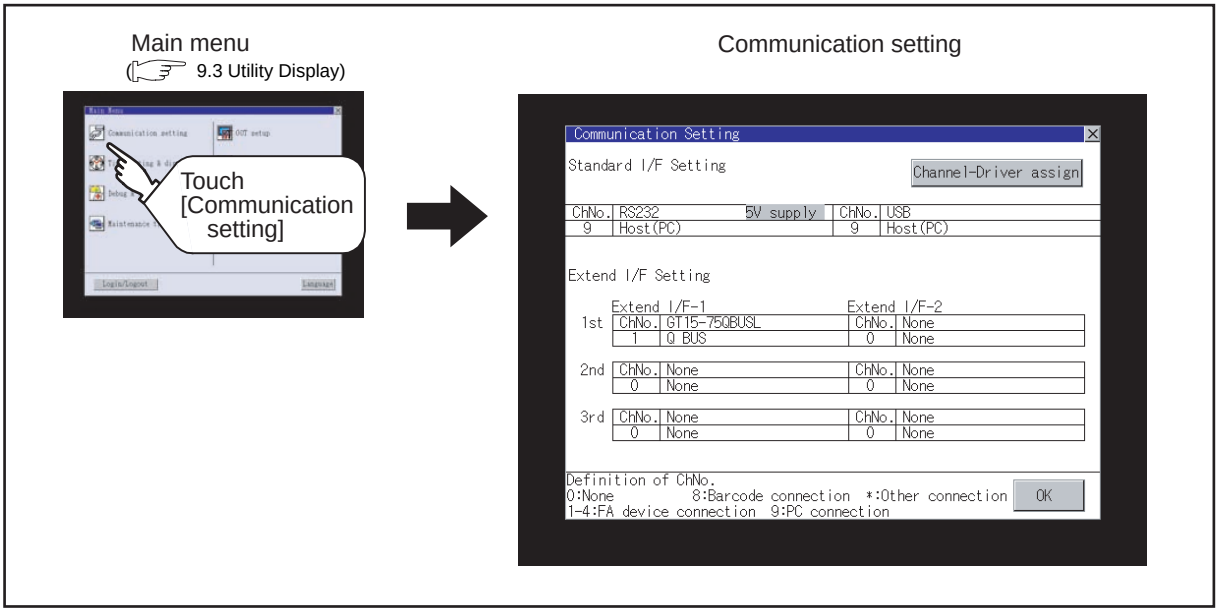
In the communication setting, the communication interface names and the related communication channel, communication driver names display and channel numbers are set.
Moreover, in the communication detail settings, the communication interface details are set. (Communication parameters setting)

10.1 Communication Setting

10.1.1 Communication setting functions

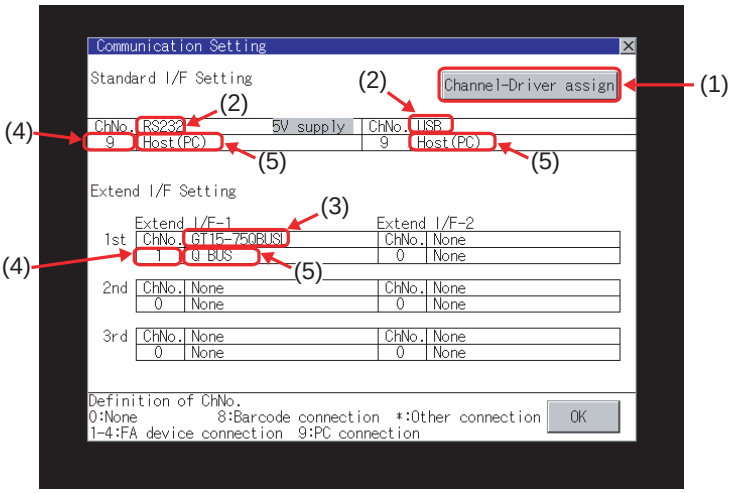
Function	Description
Channel-Driver assign	Change the assignment of channel No. and communication driver name.
Channel no. (Ch No.) setting	Set the channel numbers of the communication interface (Standard interface/ Extend interface).
Communication parameters setting	Set communication parameters of communication devices.

10.1.2 Communication setting display operation



10.1.3 Communication setting contents

This section describes setting items and display contents for Communication Setting.



(1) Channel-Driver assign

Channel No. can be assigned to the communication driver installed in the GOT.

(a) Communicating without setting [Communication Setting] of GT Designer2

Even without setting [Communication Setting] on GT Designer2, communication with controller is available by assigning channel No. with this function.

(☞ 10.1.4 1 Channel-Driver assign operation)

(b) Changing the assignment of communication drivers to channels in the utility

Without using GT Designer2, the assignment of communication drivers to channels can be changed.

(When change a communication driver, the alternative communication driver has to be installed in GOT in advance.)

(2) Standard interface display BOX

Display the communication interface included as standard in GT15☐☐.

There are the following 2 types.

RS232 ••••• For communicating with PC (GT Designer2), controller

USB ••••••• For communicating with PC (GT Designer2)

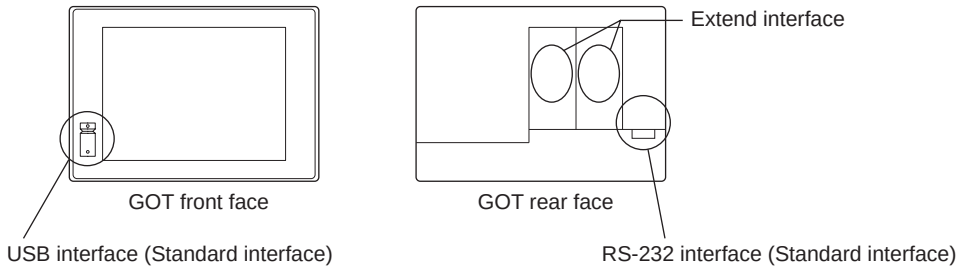
(3) Extend interface display BOX

The name of the unit installed in the extend interface is displayed.

(Displays [None] when any unit is not mounted.)

For details of each uint, refer to the following.

☞ ▪ 8.1 Communication Unit



(4) Channel number specification menu BOX

Set channel No. to use with standard interface or extend interface.

Refer to this section (5) for driver that can be assigned to each channel.

0 : Set when the communication interface is not used.

1 to 4 : Set when connecting to a controller.
(Except bar code reader and RFID controller)

5 to 7 : Not available

8 : Set when connecting to a bar code reader or a RFID controller.
A bar code reader cannot be used with a RFID controller.
Connect a bar code reader or a RFID controller.

9 : Set when connecting with PC (GT Designer2). (For USB and RS-232 interface, the simultaneous setting is possible. However, when either interface is during communication, communication is not possible for another interface.)

* : Set "*" when using the gateway function (when connection types except the Ethernet connection is used for connecting to controllers), Ethernet download function, printer, video display, RGB display, RGB output, CF card unit, CF card extension unit, sound output, or external I/O.

- Fixed to 9 for the USB interface.

(5) Driver display BOX

The name of communication driver assigned to the channels or the driver set with the Communication Setting of GT Designer2 is displayed.

For details of drivers to be displayed, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (3.7 Communication Interface Setting (Communication Settings))

Display [None] in the driver display BOX in case of the followings.

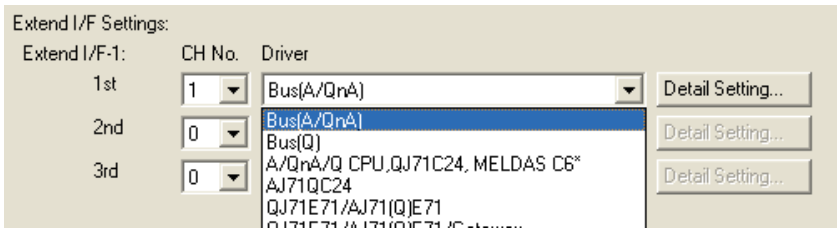
- The communication driver is not installed. (☞ 13.2 OS Information)
- In channel number specification menu BOX, [0] is set.
- The communication unit type and the communication driver are mutually not corresponding at the extend interface side.

When set the channel number to [9], the communication driver [Host (PC)] is automatically assigned.

Point

Precautions for communications between GOT and controller

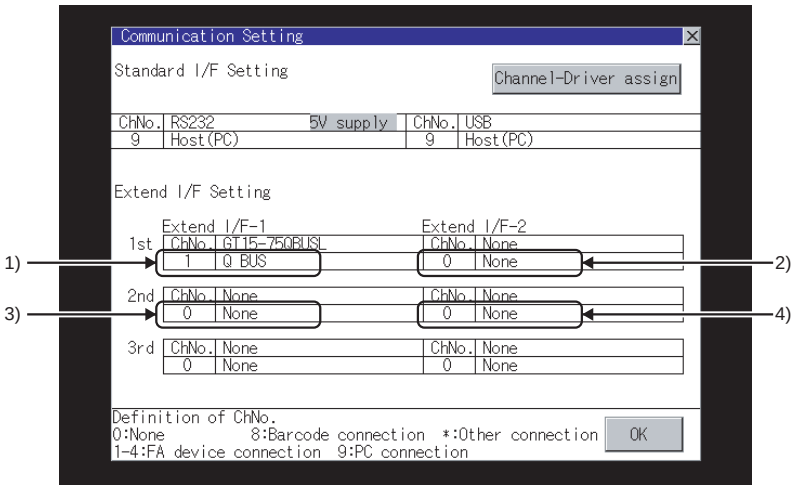
(1) Installing communication driver and downloading Communication Setting
The followings below are required for the communication interface to communicate with the controller.
1) Installing communication drivers (Up to 4 communication drivers)
2) Assigning the channel number and communication driver for the communication interface
3) Downloading the contents (project data) assigned in 2).
Perform1), 2), 3) by GT designer2.



Refer to the following for details.

- GT Designer2Version Screen Design Manual (3.7 Communication Interface Setting (Communication Settings))
- GT Designer2Version Basic Operation/Data Transfer Manual (8.3.1 Downloading project data [PC to GOT])

(2) When Communication Setting has not been downloaded.
The GOT automatically assigns the installed communication driver in the order of 1 to 4 as follows.(Only the extend interface is assigned automatically.)



1) ChNo.1, CCommunication driver installed at 1st
2) ChNo.2, CCommunication driver installed at 2nd
3) ChNo.3, CCommunication driver installed at 3rd
4) ChNo.4, CCommunication driver installed at 4th

(a) After communication driver is assigned automatically.

When saving the settings to the GOT with OK button after the automatic assignment of communication driver, automatic assignment will not be performed at the next time and after.

(b) Priority against [Communication Settings] of GT Designer2

If download the communication settings to the GOT with GT Designer2 after the automatic assignment, the GOT will operate with the communication settings of the GT Designer2. (The GOT operates with the latest communication settings.)

(3) When the communication driver does not match with the unit that is installed in the GOT

An error is displayed on the GOT when displaying [Communication setting].
If an error is displayed, confirm the combination of the communication driver and communication unit.
Refer to the following manual for the combination.

☞ GOT1000 Series Connection Manual (System Configuration in each chapter)

10.1.4 Communication setting display operation

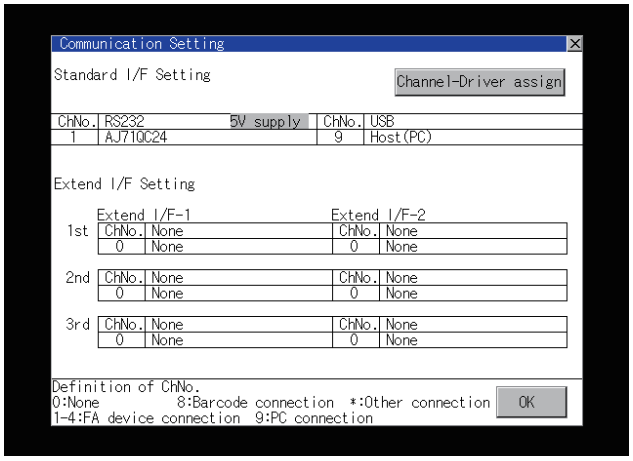
1 Channel-Driver assign operation

The following describes how to operate the Channel-Driver assign.
The example of changing to direct CPU connection (Communication driver: "A/QnA/QCPU, QJ71C24, MELDAS C6*") for the GOT of computer link connection (Communication driver: [AJ71QC24]) is used.

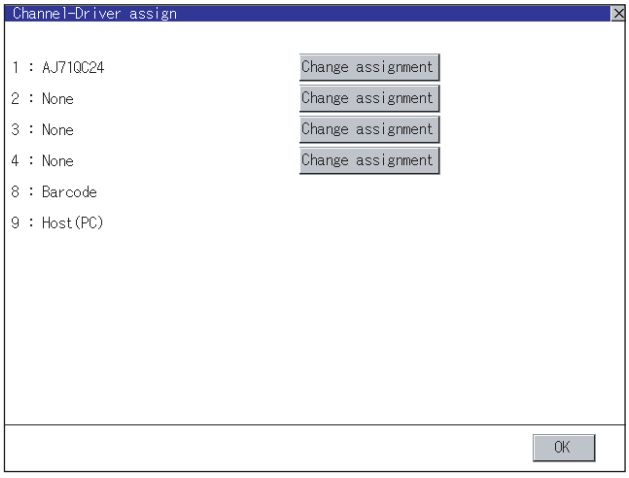
Point

Before the operation

The GOT automatically restarts after executing this setting.
If project data has been downloaded, the GOT starts monitoring of the controller after restarting.
Execute this setting after carefully confirming the safety.

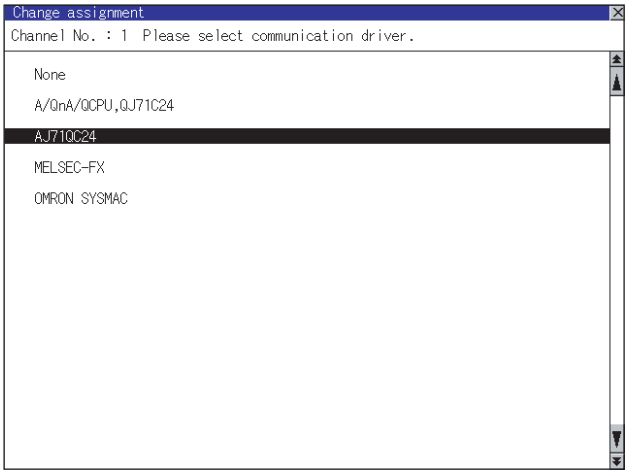


1 Install communication driver "A/QnA/QCPU, QJ71C24, MELDAS C6*" to GOT. (Download of [Communication Setting] from GT Designer is not required.)
After installing communication driver, touch the Channel Driver assign button in [Communication Setting].

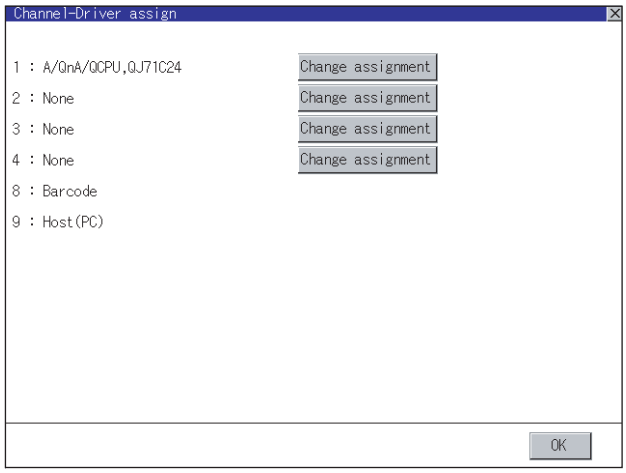


2 Touch the Change assignment button on the dislayed screen as shown left.

(Continued to next page)

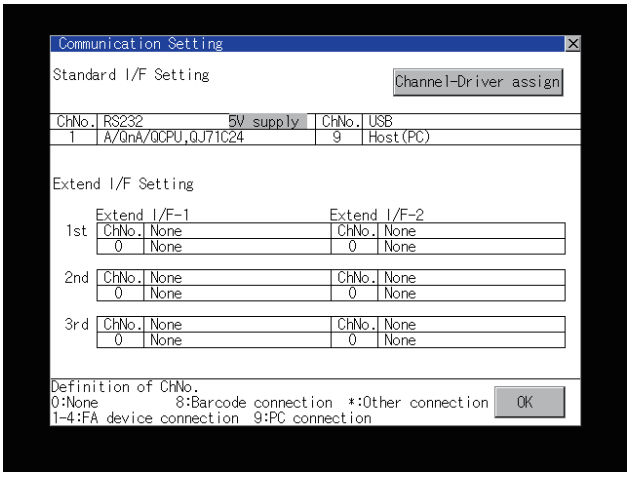


3 As the communication driver ([A/QnA/QCPU, QJ71C24]) installed in the GOT is displayed, touch it.



4 The screen returns to the Channel-Driver assign screen. Touch the OK button.

5 Touch the ⊠ button and return to the Communication Setting screen.



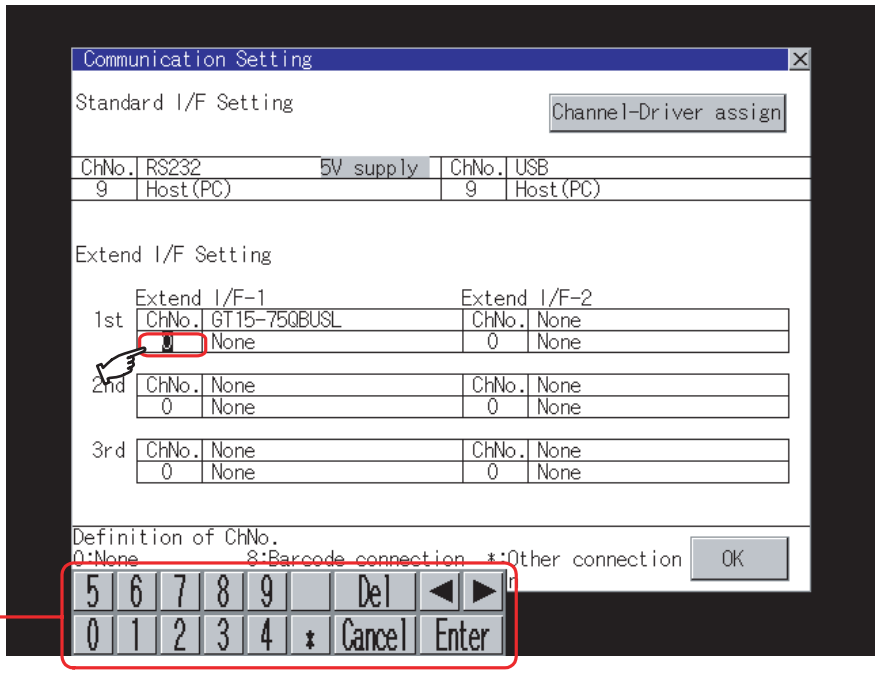
6 Confirm that the selected communication driver ([A/QnA/QCPU, QJ71C24]) is assigned.

7 After the confirmation, touch the OK button.

8 Touch the ⊠ button to restart GOT.

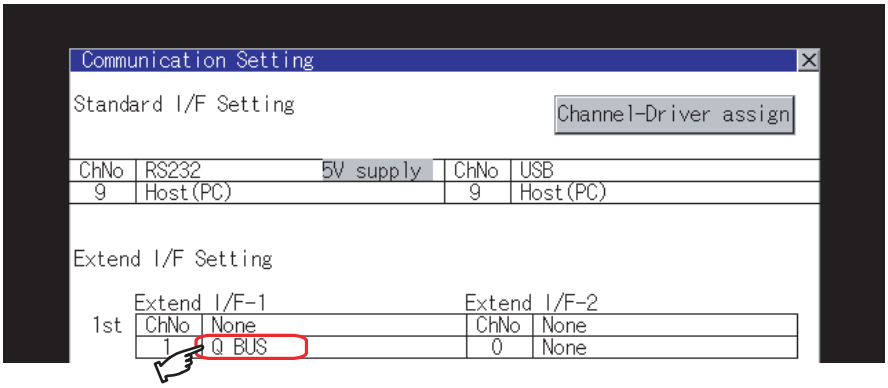
2 Channel number setting operation

1 Touch channel number specification menu BOX to be set.



2 The cursor for the channel number specification menu BOX is displayed.
Simultaneously the keyboard for a numerical input is displayed.

3 Input the channel number from the keyboard and touch Enter key, and the value is defined.
Simultaneously, the name of the communication driver corresponding to the channel number assigned by GT Designer2 is displayed in the driver display BOX.



3 Communication detail settings switching operation

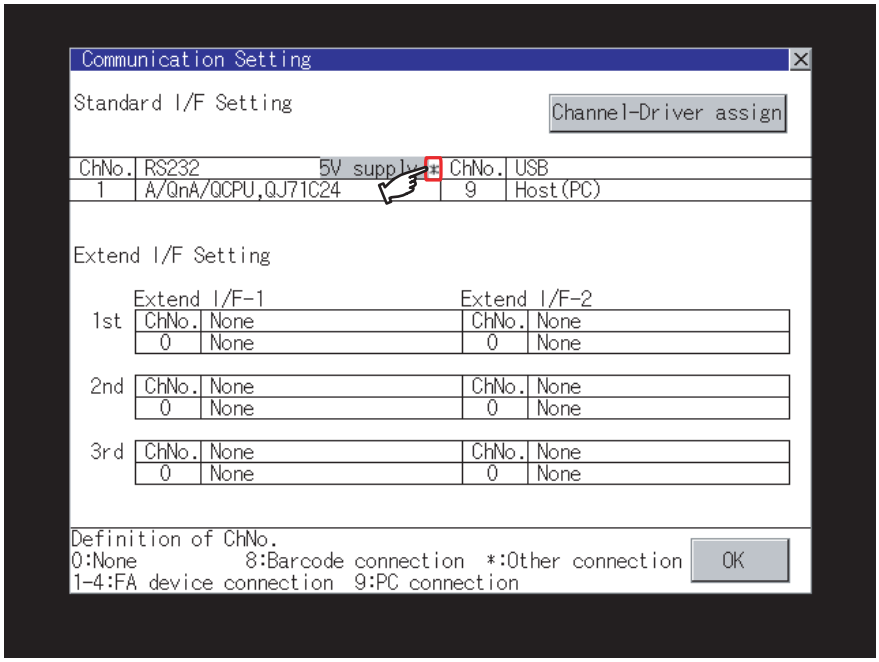
1 If you touch the driver display BOX, the screen switches to the detailed setting screen of the related controller device.

(☞ 10.2 Communication Detail Settings)

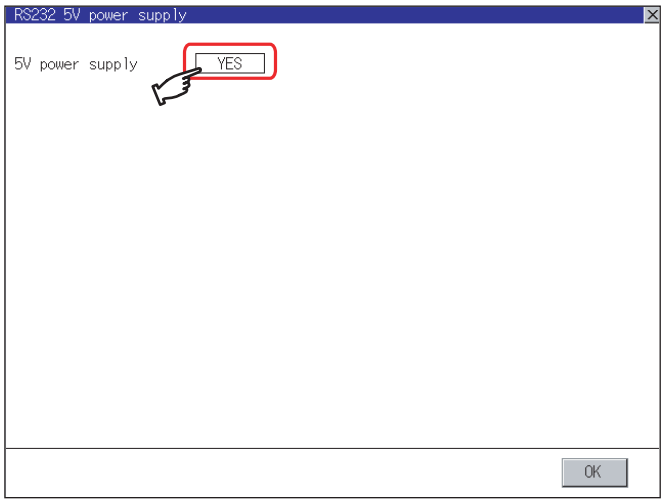
4 5V power supply setting operation

When connecting a controller to the RS-232 interface, whether to supply 5VDC power or not to the controller through 9 pins can be selected.
Thus, it is not necessary to connect an external power supply.
When setting the RS-232 interface to "9" (Host (PC)), the 5V supply is automatically changed to [NO].

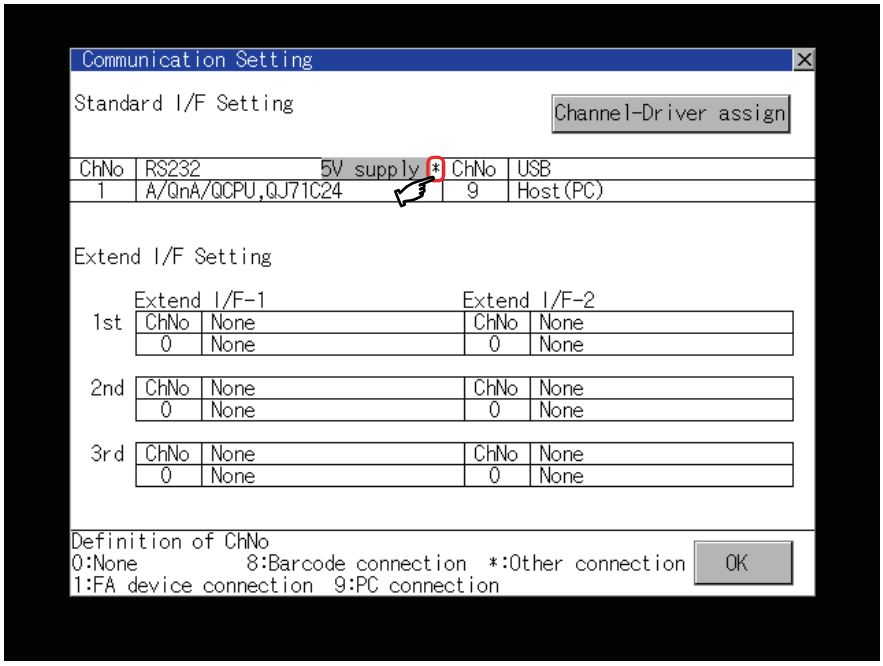
1 Touch [5V supply].



2 Select and define whether 5V power supply is supplied or not.



3 After setting completion, [∗] is displayed indicating that 5V power supplying setting is on.



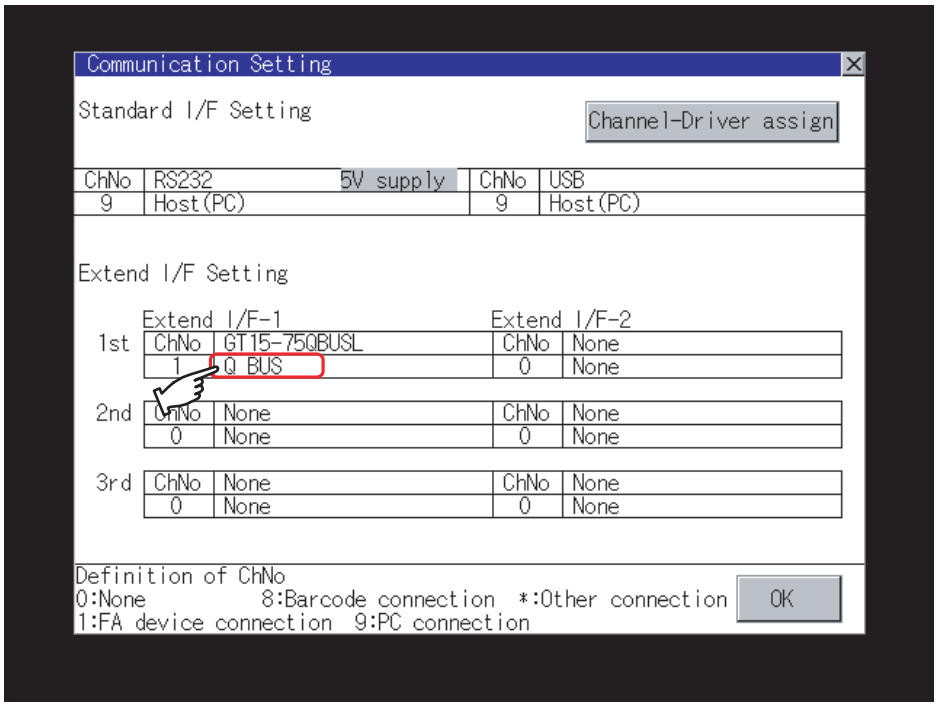
10.2 Communication Detail Settings

10.2.1 Communication detail settings functions

Function	Description
Communication parameters setting	Set various communication parameters of communication devices. The settable parameters differ according to the communication device.
Keyword setting	For the FX series PLCs, key word for protecting program in the PLC can be set.
Key word deleting	For the FX series PLCs, key word for protecting program in the PLC can be deleted.
Key word protection cancel	For the FX series PLCs, the program protection status in the PLC can be cancelled.
Keyword protection	For the FX series PLCs, the cancelled program protection status in the PLC can be returned to the protection status again.

10.2.2 Communication detail settings display operation

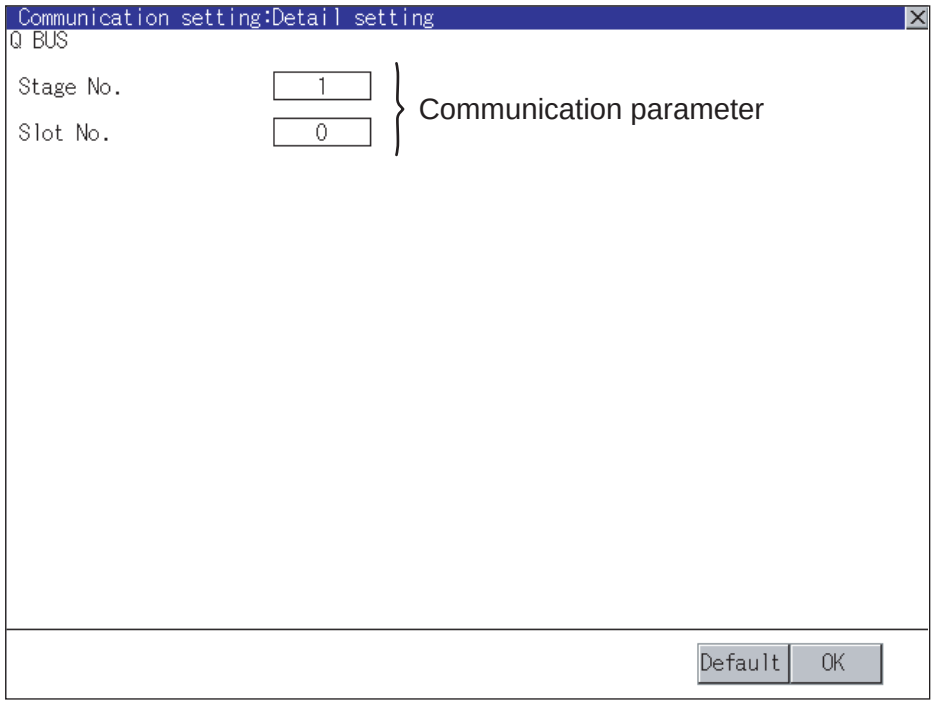
1 Touch the driver display BOX of the communication parameter to be set in the communication setting screen.



2 The screen switches to the communication detail setting screen.

Set communication parameters from this screen.
Refer to the following for the setting change operation.

☞ 9.3.3 Basic operation of settings change



Point

Communication parameter setting by Designer2

Set the communication parameters for each communication driver at [Communication Settings] in [System Environment] of GT Designer2.
When change the communication parameters after downloading project data, change the setting at communication detail setting of GOT.

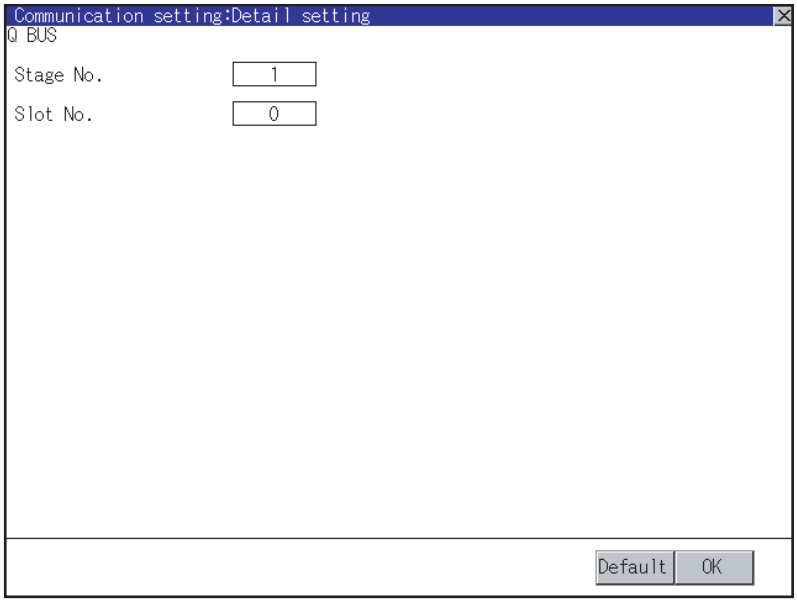
☞ GT Designer2 Version □ Screen Design Manual
(3.7 Communication Interface Setting (Communication setting))

10.2.3 Display contents of communication detail settings

The contents of Communication Detail Settings varies according to driver type.

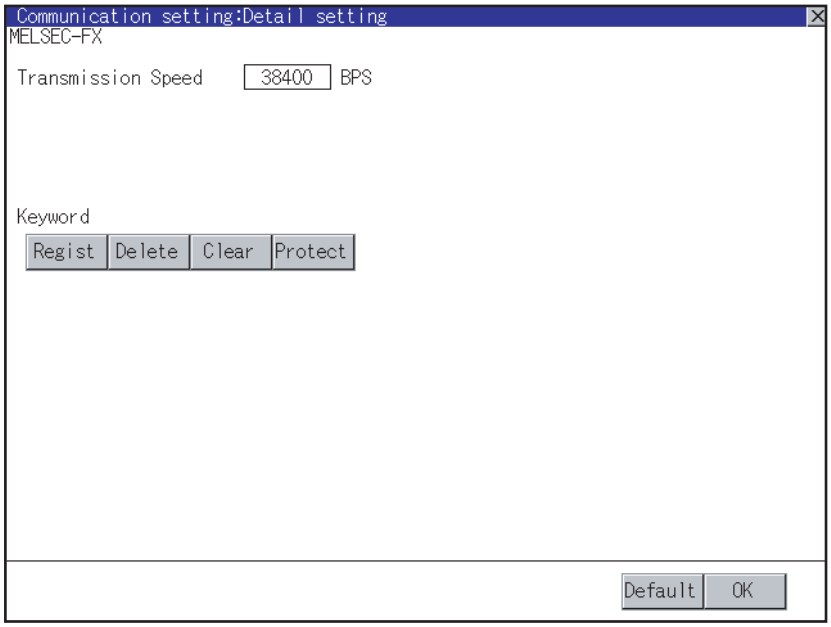
This section explains setting items different from the communication detail settings of the GT Designer2. For setting items other than described in this section, refer to the following manual.

GT Designer2 Version□Screen Design Manual
(3.7 Communication Interface Setting (Communication Settings))



1 Key word registration, deletion and protection delete

MELSEC-FX



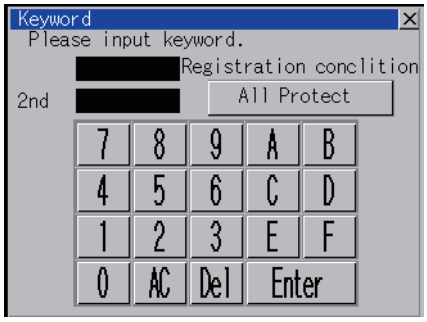
(1) Registration

Register key words.

1 Touching the [Regist] key pop-up displays the keyboard for inputting a keyword.

2 Input a keyword and touch the [Enter] key, and the registration completes.

Up to 8 characters can be set for keyword with using A to F and 0 to 9.



PLC connected	Setting	
	When registering keyword and 2nd keyword	When registering keyword only
FX CPU compatible with 2nd keyword	[Registration condition]*1 can be selected.	[Registration condition]*1 cannot be selected.
FX CPU not compatible with 2nd keyword	—	

*1 [Registration condition]

The access restriction can be selected from [Read/Write Protect], [Write Protect], and [All Protect].
For access restriction on each setting, refer to the following manual.

☞ The User's Manual of the FX series PLC you are using

Point

(1) How to select a keyword protection level

For equipments that are allowed to operate the FX PLC on line, 3 levels of protection level can be set.

When performing monitoring or changing settings with any on-line equipment is required, set password with referring to the following.

(a) When setting keyword only

Select a protection level by the initial letter of keyword.

All operation protect: Set a keyword with initial letter of "A", "D" to "F", or "0" to "9".

Read/Incorrect write protection : Set a keyword with initial letter of "B".

Incorrect write protect: Set a keyword with initial letter of "C".

(b) When setting keyword and 2nd keyword

Select a protection level by [Registration condition].

(2) Monitoring availability at each keyword protection level

Device monitoring availability at each keyword protection level is shown in the following.

Item		When registering keyword only			When registering keyword and 2nd keyword			Keyword not registered or protection cancelled
		All operation protect	Read/ Incorrect write protection	Incorrect write protect	All on-line operation protect	Read/ write protect	Write protect	
Monitoring devices		○	○	○	×	○	○	○
Changing devices	T, C set value and file register (D1000 and the following)	×	×	×	×	○	○	○
	Other than the above	○	○	○	×	○	○	○

(3) Difference between all online operations prohibition and all operations prohibition

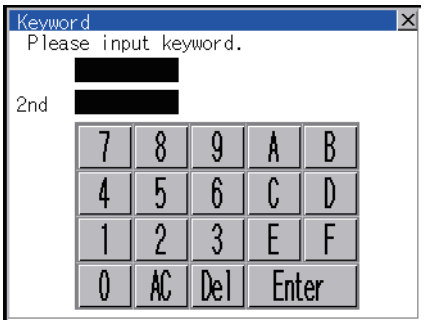
When specifying All online operations prohibited, displaying devices and inputting data with a programming tool or GOT are all prohibited.

When all operations are prohibited, displaying devices and inputting data with the GOT are enabled while all operations using a programming tool are prohibited.

(2) Deletion
Delete a registered keyword.

1 Touching the [Regist] key pop-up displays the keyboard for inputting a keyword.

2 Input a key word and touch the [Enter] key, and the keyword is deleted.

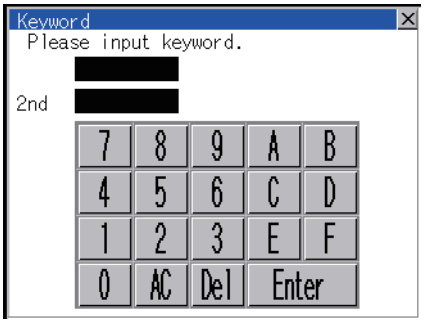


PLC connected	Setting
FX CPU compatible with 2nd keyword	Input a keyword to delete.
FX CPU not compatible with 2nd keyword	Input the keyword to delete only into the keyword. The 2nd keyword will be ignored.

(3) Protection delete
Delete the protection by key word in order to access to a FX PLC to which a key word is registered.

1 Touching the [Clear] key pop-up displays the keyboard for inputting a keyword.

2 Input a keyword and touch the [Enter] key to delete the protection.



PLC connected	Setting
FX CPU compatible with 2nd keyword	Input a keyword to delete the protection.
FX CPU not compatible with 2nd keyword	Input a keyword to delete only into the keyword. The 2nd keyword will be ignored.

(4) Protection
Reset the keyword in which protection has been deleted to the protection status.

1 Touch the [Protect] key, and the keyword goes to a protected status.

11. DISPLAY AND OPERATION SETTINGS (GOT SET UP)

Setting screen for display and setting screen for operation can be displayed from GOT setup.
In the setting screen for display and the setting screen for operation, the following settings can be set.

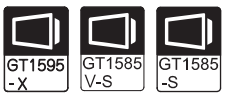
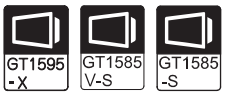
Item	Description	Reference page
Display	Opening screen time, screen save time, screen save backlight, language, battery alarm display, Invert Color, human sensor, sensor detect level, sensor detect time, sensor off delay	11-2
	Brightness	11-12
Operation	Buzzer volume, window move buzzer volume, Key sensitivity, Key reaction speed, Touch detection mode	11-14
	Security setting	11-18
	Utility call key	11-20
	Touch panel calibration	11-23
Q/QnA ladder monitor	Data save location	11-26
Transparent mode	Ch No.	11-29
Video/RGB Setting	Video unit, video display, RGB display	11-31
Backup/ restoration setting	Setting the storage locations for backup data and backup settings, and setting the maximum number of backup data	11-40
	Setting the trigger backup	11-44

11.1 Display Settings

11.1.1 Display setting functions

Setting regarding display is possible.
The items which can be set are shown below. When each item part is touched, the respective setting becomes possible.

Items	Description	Setting range
Opening screen time	The title display period at the main unit boot can be set.	0 to 60 seconds *1 <At factory shipment: 5 seconds >
Screen save time	The period from the user stops the touch panel operation till the screen save function starts can be set.	0 to 60 minutes <At factory shipment: 0 minutes>
Screen save backlight	Whether turn ON or OFF the backlight simultaneously at the screen save function start can be specified.	ON/OFF <At factory shipment: OFF>
Language*3	Confirmation of the current language and switching language can be performed regarding with the language displayed by utility and dialogue.	日本語 (Japanese) English (English) 中文(简体) (Chinese (Simplified)) 中文(繁體) (Chinese (Traditional)) 한국어 (Korean) Deutsch (German) <At factory shipment: User's selection>
Battery alarm display	Whether to display system alarm when the voltage of the GOT internal battery has dropped can be specified.	<At factory shipment: OFF>
Brightness, Contrast	The brightness can be adjusted. ☞ 11.2 Brightness, Contrast Adjustment	—
Invert Colors GT1550-Q	Whether to invert white and black on the user-created screen and utility screen can be specified.	ON/OFF <At factory shipment: OFF>
Human sensor GT1595-X GT1585V-S GT1585-S	Screen saver status cancel by human sensor can be set to Effective or Invalid.	Effective/Invalid <At factory shipment: Effective>
Sensor detect level *2 GT1595-X GT1585V-S GT1585-S	The sensor detect level can be set.	0 to 10 <At factory shipment:10>

Items	Description	Setting range
Sensor detect time *2 	The time corresponding to the [Sensor detect level] is displayed. (setting is disabled) When the [Sensor detect level] is changed, the corresponding time is reflected by touching Enter button.	0 to 4 <At factory shipment: 4sec>
Sensor off delay 	The time period from when the human sensor detects no human movement until the Human Sensor Detection Signal (System Signal 2-1.b5) turns OFF can be set.	0Min 10Sec to 60Min 0Sec <At factory shipment: 0Min 10Sec>

*1: If setting 0, the title screen is not hidden.
The title screen is always displayed for 4 seconds or longer (which changes depending on the project data contents).

*2: The monitoring time corresponding to the sensor detect level (0 to 10) is as follows.
As the sensor detect level becomes greater, the sensitivity of the human sensor becomes higher.

Sensor detect level	10	9	8	7	6	5	4	3	2	1	0
Monitoring time [s]	0	0.1	0.2	0.4	0.8	1	1.5	2	2.5	3	4

*3: Only selectable languages are displayed.
The selectable languages differ depending on the fonts installed in the GOT.
For details of the fonts, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (2.3 Specifications of Applicable Characters)

Point

(1) Display setting by GT Designer2
Set title display period, screen save time and screen save backlight at [GOT set up] in [System Environment] of GT Designer2.
When change a part of the setting after downloading the project data, change the setting by [Display] screen of the GOT.

☞ GT Designer2 Version □ Screen Design Manual (3.8 Setting of the GOT display and operation (GOT setup))

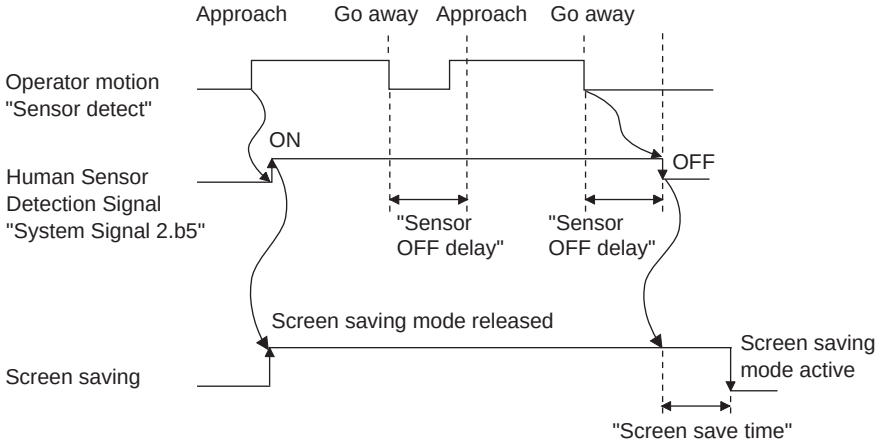
(2) Screen save time
Using the system information function can compulsorily switch the controller to the screen saving status (Forced Screen Saver Disable Signal) or disable the screen save time (Automatic Screen Saver Disable Signal) set with Utility.

☞ GT Designer2 Version □ Screen Design Manual (3.6 Setting System Information)

(3) Screen save backlight
When [Screen save backlight] is set to [ON], using the system information function (Backlight OFF output signal) can switch the backlight OFF from the controller.
When [Screen save backlight] is set to [OFF], the above signal has no effect on the screen save backlight.

☞ GT Designer2 Version □ Screen Design Manual (3.6 Setting System Information)

(4) Display control by human sensor (Specific to GT1595-X, GT1585V-S, GT1585-S)
The human sensor is a function that releases the GOT from the screen saving mode without the necessity to touch the GOT.
This function releases the GOT from the screen saving mode when the operator has come closer to the GOT.



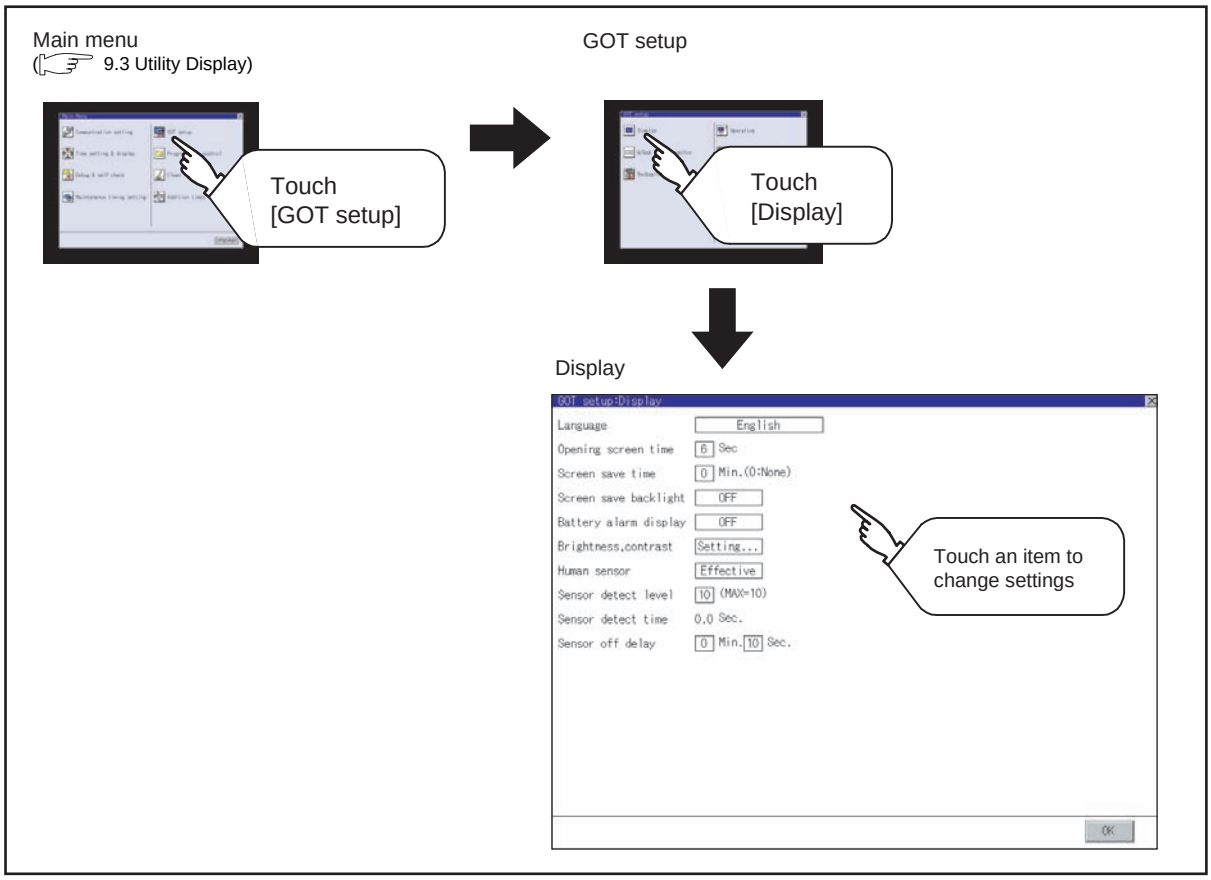
When there is no operator around the GOT for the time set as "Sensor OFF delay", the "Human Sensor Detection Signal" turns OFF.
When the time set as the "Screen save time" elapses after the "Human Sensor Detection Signal" turns OFF, the GOT enters the screen saving mode.

Refer to the following manual for the Human Sensor Detection Signal (System Signal 2-1.b5).

☞GT Designer2 Version☐ Screen Design Manual
(3.6 Setting System Information)

(5) When setting the human sensor to invalid (Specific to GT1595-X, GT1585V-S, GT1585-S)
Even if setting the human sensor to invalid by the utility, the Human Sensor Detection Signal (System Signal 2-1.b5) turns ON when the human sensor detects human movement.
Unintended operation may result, therefore, if controlling the Forced Screen Saver Enable Signal (System Signal 1-1.b1) and Human Sensor Detection Signal associating them with each other by a sequence program, etc.
When setting the human sensor to invalid, review the related sequence program, etc.

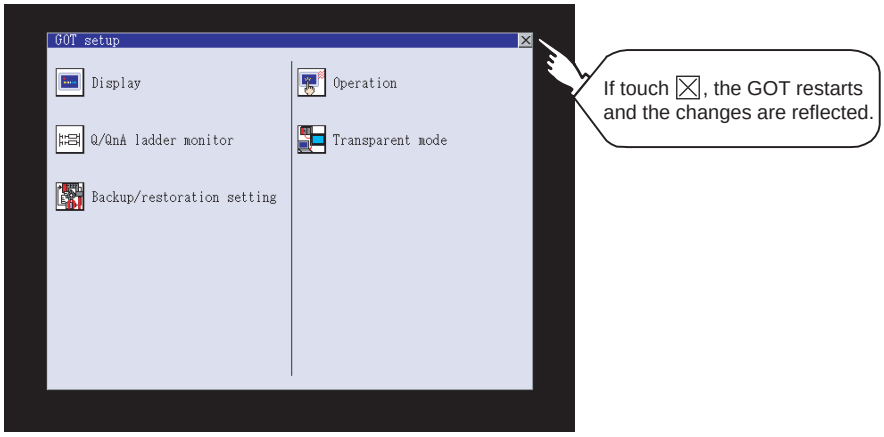
11.1.2 Display operation of display setting



Point

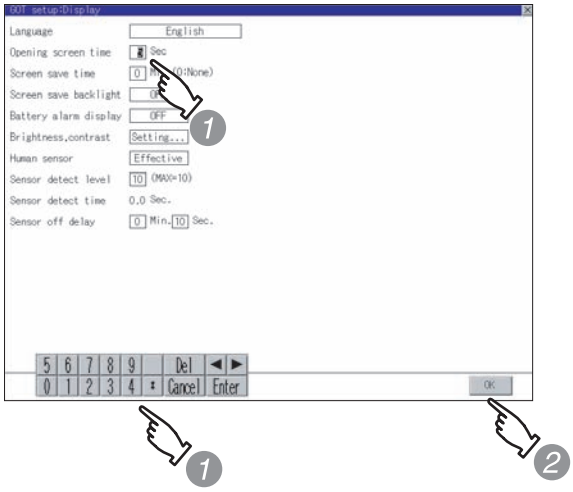
Restart after setting change

If return the display to the GOT setup screen by touching the ☒ button after the setting of each item is changed and touch the ☒ button on the GOT setup screen, the GOT will restart.
After GOT restarts, it is displayed with the changed settings.
If restarted the GOT by powering OFF the GOT without the procedure above, the setting contents are canceled without reflected.



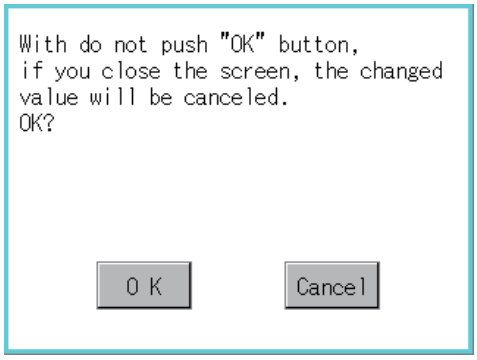
11.1.3 Display setting operations

1 Opening screen, screen save time



1 If touching the setting (numerical), keyboard is displayed. Input numeric with the keyboard.

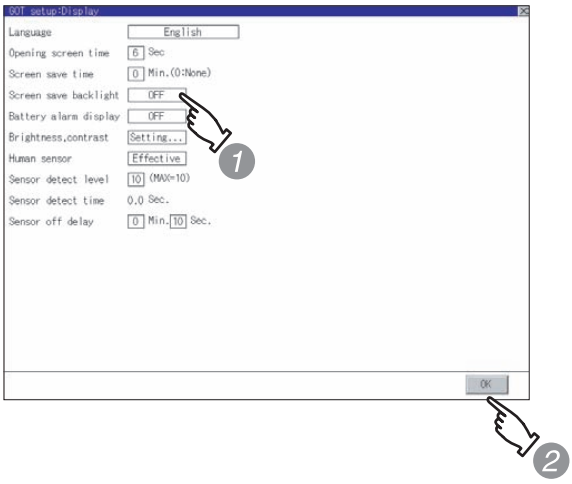
2 Setting contents are defined if [OK] button is touched.



3 If touch ☒ button without touching [OK] button, the dialog mentioned left is displayed.

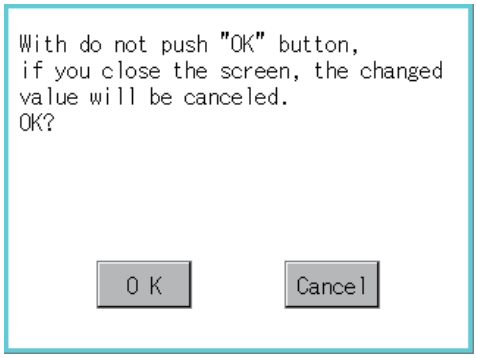
4 If close the display setting and GOT setup screens after completing the setting of all items to change with ☒ button, GOT restarts and reflects the setting contents.

2 Screen save backlight, battery alarm display



1 Setting item is changed if setting item is touched. (ON ⇄ OFF)

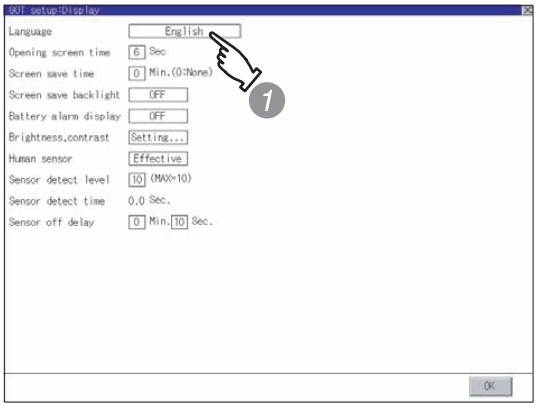
2 Setting contents are defined if [OK] button is touched.



3 If touch ⊠ button without touching [OK] button, the dialog mentioned left is displayed.

4 If close the display setting and GOT setup screens after completing the setting of all items to change with ⊠ button, GOT restarts and reflects the setting contents.

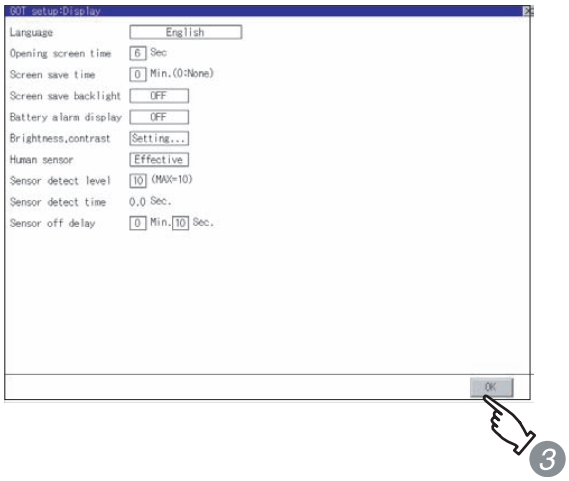
3 Language



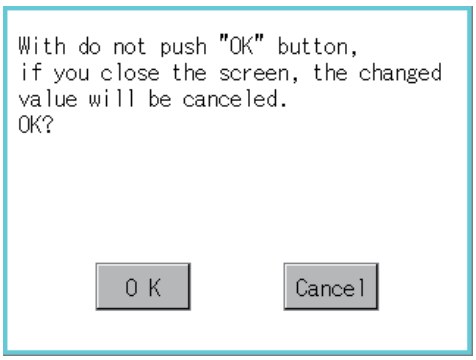
1 Touch the setting item to display the Select Language screen.



2 When touching the button of a desired language, the language is selected and the screen returns to the Display screen. *1



3 Touching the OK button determines the set contents.
The displayed language will not be changed until 5 is performed.



4 If touch ☒ button without touching OK button, the dialog mentioned left is displayed.

5 If close the display setting and GOT setup screens after completing the setting of all items to change with ☒ button, GOT restarts and reflects the setting contents.

*1: Only selectable languages are displayed.
The selectable languages differ depending on the fonts installed in the GOT.
For details of the fonts, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual (2.3 Specifications of Applicable Characters)

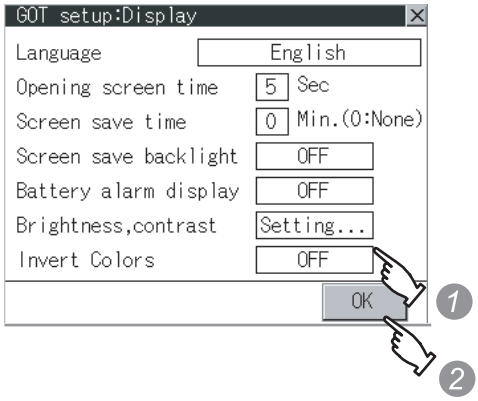
4 Brightness, Contrast

Refer to the following for brightness, contrast setting.

☞ 11.2 Brightness, Contrast Adjustment

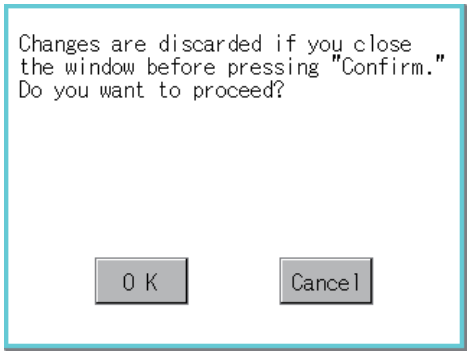
5 Invert Colors

GT1550 -Q



1 Touching each setting item changes its setting. (ON ⇄ OFF)

2 Touching the OK button fixes the settings.

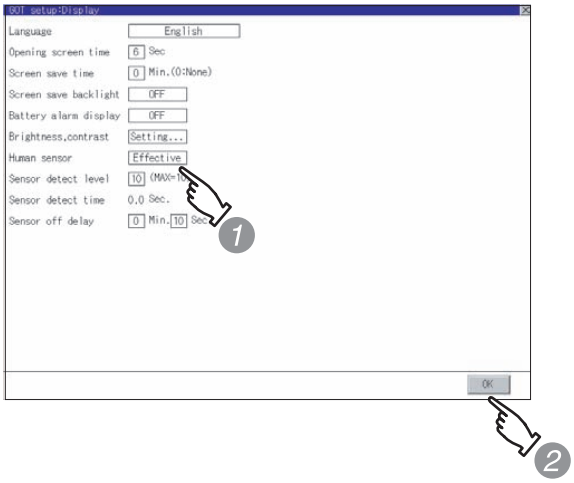


3 Touching the ☒ button but not the OK button displays the left dialog box.

4 If closing the [GOT setup: Display] and [GOT setup] screens after setting all items to be changed with the ☒ button, the GOT restarts and reflects the setting.

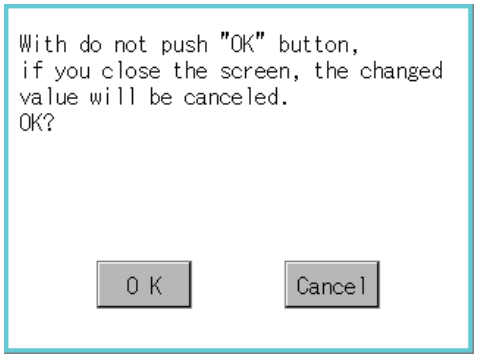
6 Human sensor

GT1595-X GT1585V-S GT1585-S



1 Setting item is changed if setting item is touched. (Effective ⇄ Invalid)

2 Setting contents are defined if OK button is touched.

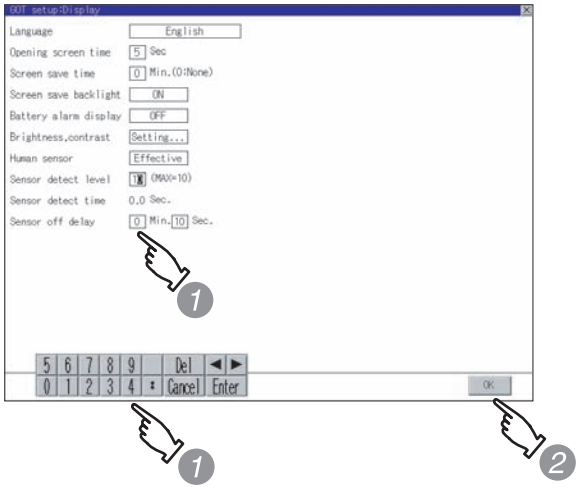


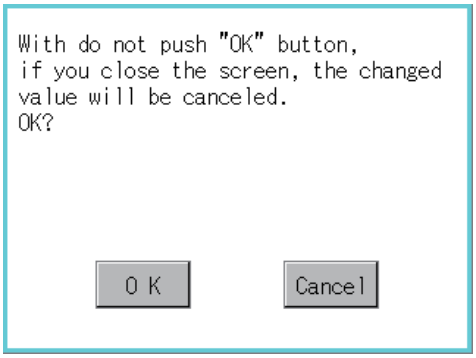
3 If touch ☒ button without touching OK button, the dialog mentioned left is displayed.

4 If close the display setting and GOT setup screens after completing the setting of all items to change with ☒ button, GOT restarts and reflects the setting contents.

7 Sensor detect level, sensor off delay

GT1595-X GT1585V-S GT1585-S





1 If touching the setting (numerical), keyboard is displayed. Input numeric with the keyboard.
To move the cursor, touch the ◀ or ▶ button.

2 Setting contents are defined if OK button is touched.

3 If touch ⊠ button without touching OK button, the dialog mentioned left is displayed.

4 If close the display setting and GOT setup screens after completing the setting of all items to change with ⊠ button, GOT restarts and reflects the setting contents.

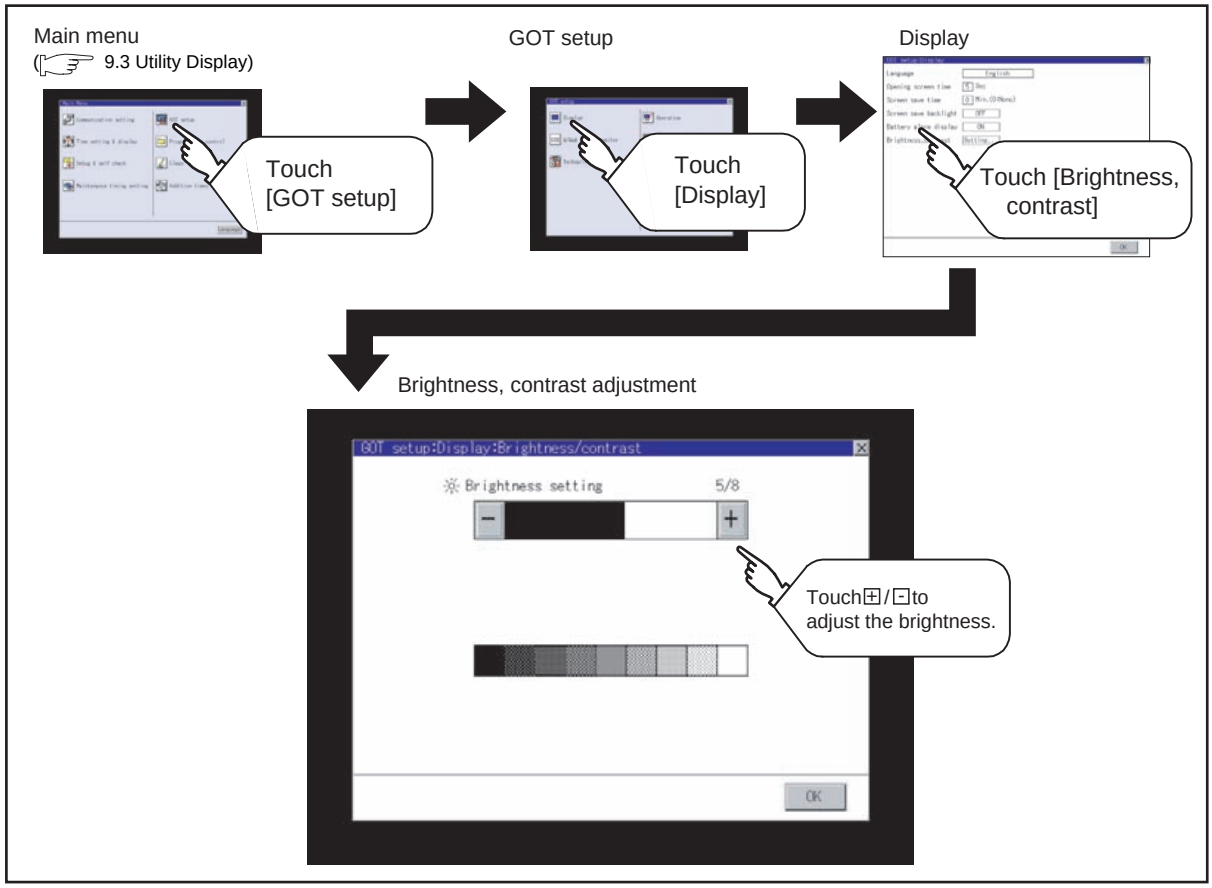
11.2 Brightness, Contrast Adjustment

11.2.1 Functions of the brightness, contrast

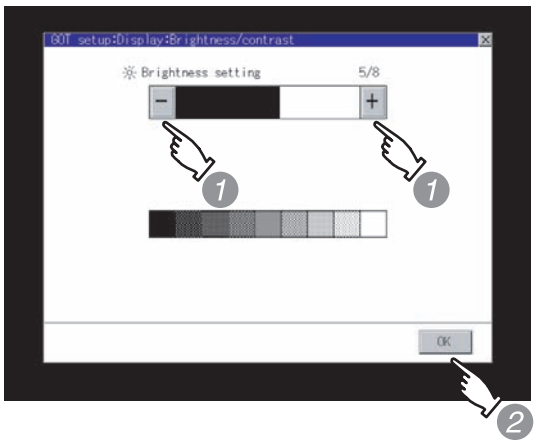
The brightness and contrast can be adjusted.

Function	Description
Brightness setting	Brightness of display part can be adjusted by 8 levels. (4 levels for the GT1575-VN, GT1572-VN or GT1562-VN)
Contrast adjustment	The display section contrast can be adjusted by 16 levels. (GT1555-QSBD, GT1550-QLBD)

11.2.2 Display operation of brightness, contrast

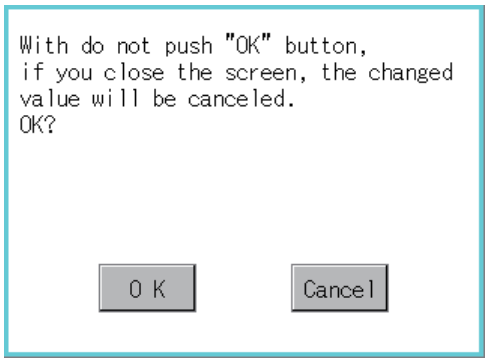


11.2.3 Operating the brightness, contrast



1 Brightness can be adjusted by touching [+], [-] key of brightness adjustment.

2 Setting contents are defined if [OK] button is touched.



3 If touch [OK] button without touching ☒ button, the dialog mentioned left is displayed.

4 If close the display setting and GOT setup screens after completing the setting of all items to change with ☒ button, GOT restarts and reflects the setting contents. (When changing only [Brightness, contrast], the GOT does not restart.)

11.3 Operation settings

11.3.1 Operation setting functions

Setting regarding GOT operation can be set.
The items which can be set are described below. If touch the each item part, the respective setting becomes possible.

Function	Description	Setting range
Buzzer volume setting	Buzzer volume setting can be changed.	OFF/SHORT/LONG <At factory shipment: SHORT>
Window move buzzer volume setting	Whether turn ON/OFF buzzer when move window can be selected.	ON/OFF <At factory shipment: ON>
Security setting screen change	Security level change screen can be displayed. ☞ 11.4 Security Level Change	—
Utility call key screen change	Utility call key setting screen can be displayed. ☞ 11.5 Utility Call Key Setting	—
Key sensitivity setting	The touch panel sensitivity when touching the GOT screen can be set. E.g. a setting can be changed when double-touch is made when touching the GOT screen only once. (For preventing chattering)	1 to 8 *1
Touch panel calibration 	Touch panel reading error can be corrected. ☞ 11.6 Adjusting the Touch Panel Position (Touch panel calibration Setting)	—
Touch detection mode 	For the GT1595-X, whether to reduce incorrect inputs (responses of parts other than the touched part) when more than 2 points are touched simultaneously on the GOT or to prioritize response can be selected.	Continuous key input/ Avoid input error <Default: Continuous key input>

*1 Relation between the [Key sensitivity] setting and [Key reaction speed]

The larger the set value in [Key sensitivity] is, the shorter the time taken from touching the touch panel until the GOT responds becomes.
E.g. decrease the value set for [Key sensitivity] when double-touch is made when touching the GOT screen only once. (Decrease the reaction speed.)
The relation between the [Key sensitivity] setting and [Key reaction speed] is as follows.

[Key sensitivity] setting	Quick response ←							→ Slow response
	8	7	6	5	4	3	2	1
[Key reaction speed]	- 20ms-	- 10ms	± 0ms (Standard)	+ 10ms	+ 20ms	+ 40ms	+ 80ms	+ 120ms

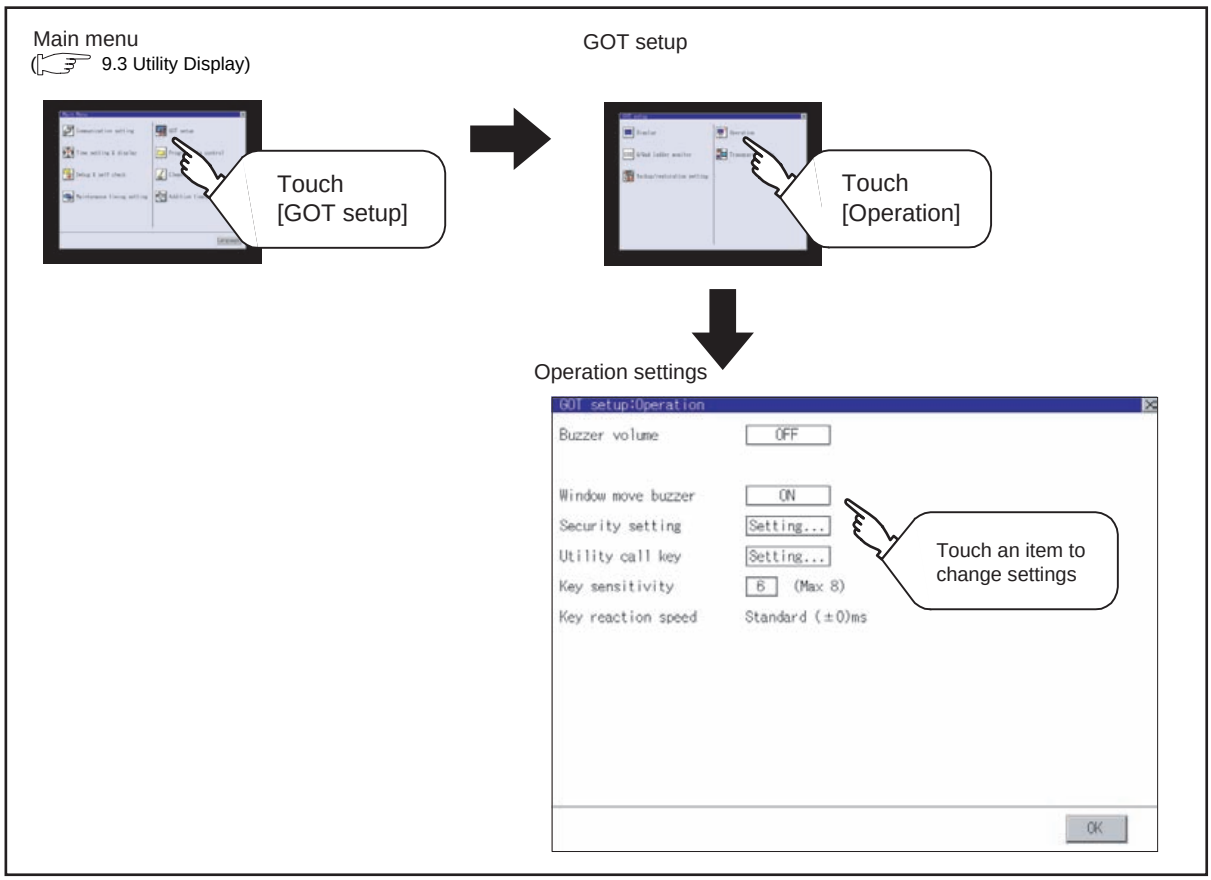
Point

Operation settings by GT Designer2

Set buzzer volume and window move buzzer volume by [GOT setup] in [System Environment] of GT Designer2.
When change a part of the setting, change the setting by the GOT display setting after downloading the project data.

☞GT Designer2 Version □ Screen Design Manual
(3.8 Setting of the GOT display and operation (GOT setup))

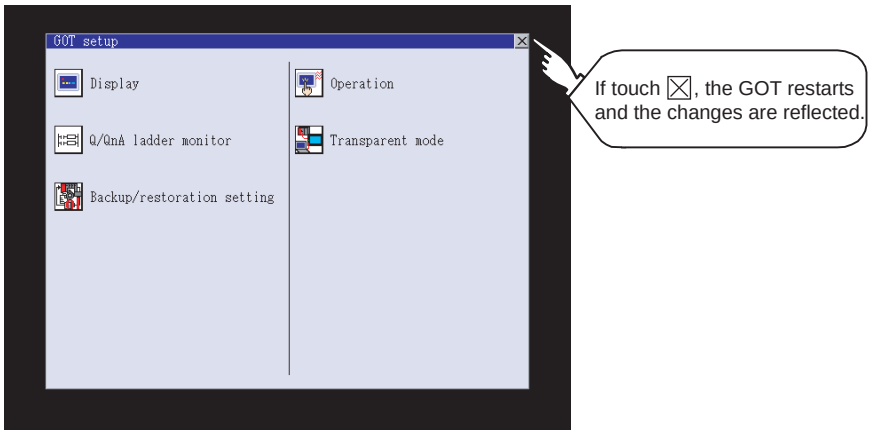
11.3.2 Display operation of display setting



Point

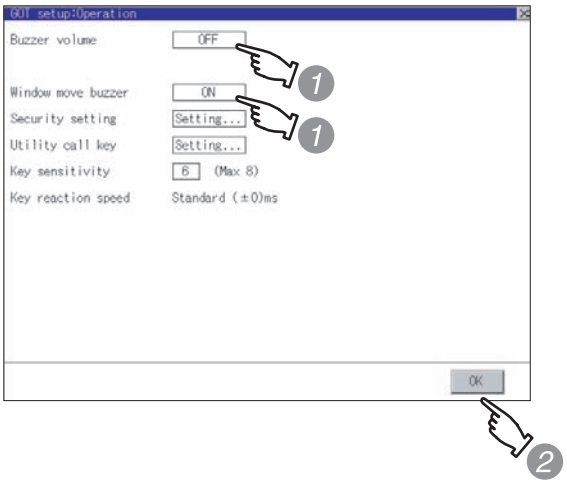
Restart after setting change

If return the display to the GOT setup screen by touching the ☒ button after the setting of each item (excluding the security setting) is changed and touch the ☒ button on the GOT setup screen, the GOT will restart.
After GOT restarts, it is displayed with the changed settings.
If restarted the GOT by powering OFF the GOT without the procedure above, the setting contents are canceled without reflected.

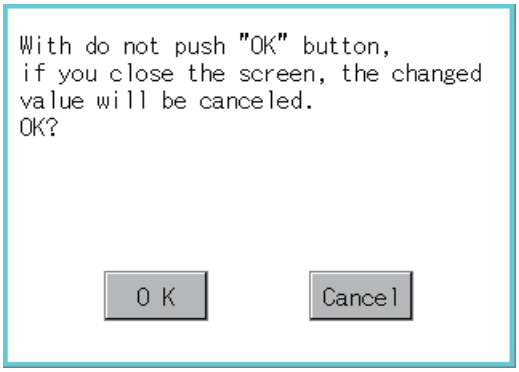


11.3.3 Setting operation of operation

1 Buzzer volume, window move buzzer, Touch detection mode



1. Setting items are changed if setting item is touched.
2. Setting contents are defined if OK button is touched.



3 If touch ☒ button without touching OK button, the dialog mentioned left is displayed.

4 If close the display setting and GOT setup screens with ☒ button after completing the setting of all items to change, GOT restarts and reflects the setting contents.

2 Security setting

Refer to the following for the security setting operation

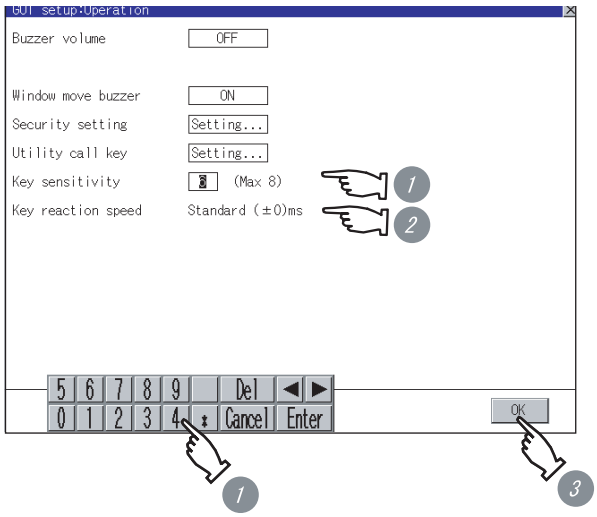
☞ 11.4 Security Level Change

3 Utility call key

Refer to the following for the utility call key operation

☞ 11.5 Utility Call Key Setting

4 Key sensitivity setting



1 If touching the setting items, keyboard is displayed.
Input numeric with the keyboard.

2 The key response speed corresponding to the [Key sensitivity] setting is displayed.

3 Touching the OK button determines the setting.

5 Touch panel adjustment

Refer to the following for touch panel adjustment operation.

☞ 11.6 Adjusting the Touch Panel Position (Touch panel calibration Setting)

11.4 Security Level Change

11.4.1 Security level change functions

Changes the security level to the same security level set by each object or screen switch.
To change the security level, input the password of the security level which is set in GT Designer2.I

Security level setting..... GT Designer2 Version ☐ Screen Design Manual (5.8 Security function)

Password setting..... GT Designer2 Version ☐ Screen Design Manual (3.5 Set Password)

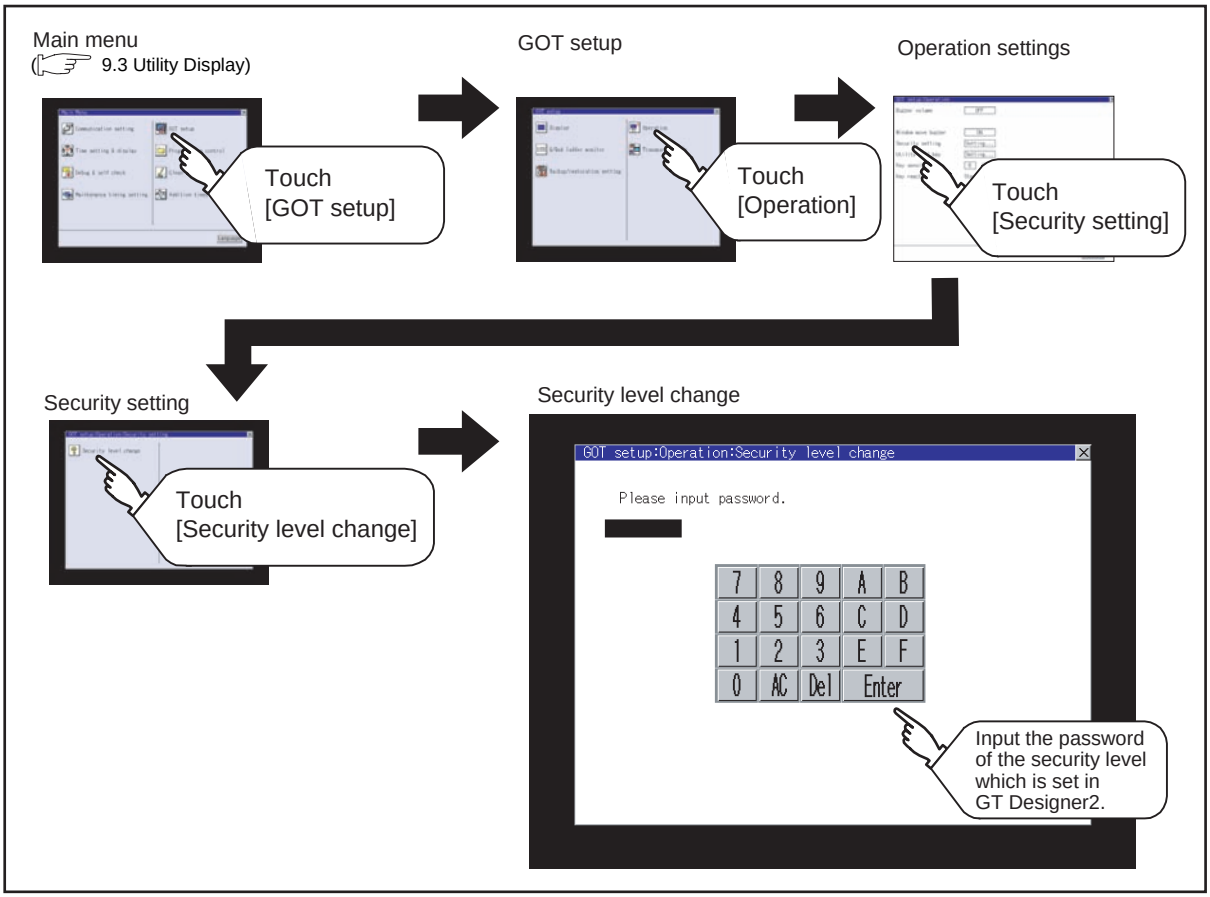
Point

Restrictions on screen display

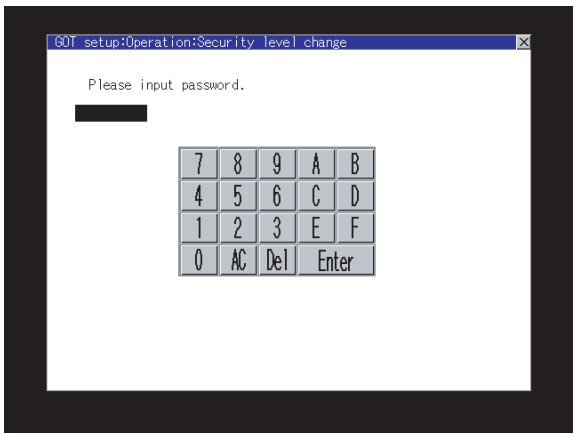
The security level change screen cannot be displayed when project data do not exist in GOT.

Change the security level after downloading the project data to GOT.

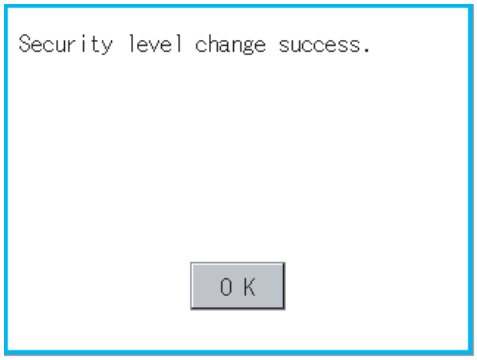
11.4.2 Displaying the security level change



1 Password input operation



1. By touching 0 to 9, A to F key, the password of the changed security level is input.
2. When correcting the input character, touch Del key to delete the correcting character and input the password again.



3. After inputting password, touch the Enter key.
   When the password matches, the normal completion message is displayed. When the password does not match, an error message is displayed.



4. If OK button is touched it returns to the password input screen again.

5. If ⊠ button is touched it returns to security setting screen.

Remark

About forgetting to return to the original level after changing security level temporarily

When use GOT after temporarily changing the security level, do not forget to return the security level to the original level.

11.5 Utility Call Key Setting

11.5.1 Utility call key setting function

The key position for calling the main menu of the utility can be specified.
For the key position, 1 or 2 points can be specified from 4 corners on the screen.
When specifying 1 point, a setting to switch the screen to the utility by keeping pressing the key position is available.
This prevents a switching to the utility by an unintentional operation.

The number of key positions that can be set differs depending on the GOT type.

Model name	The number of settable key positions
GT1595	1 point
GT1585, GT157□, GT156□, GT155□	1 or 2 points

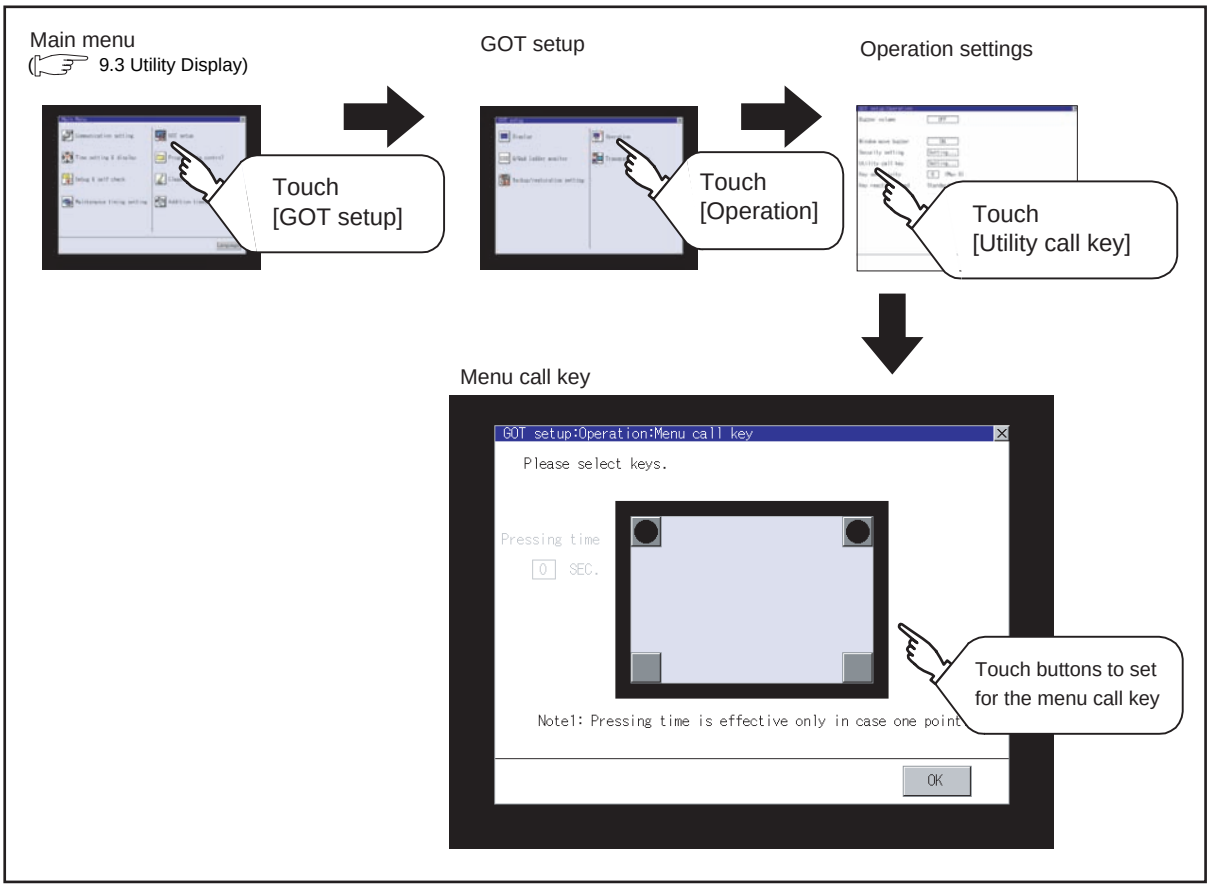
Point

Operation settings by GT Designer2

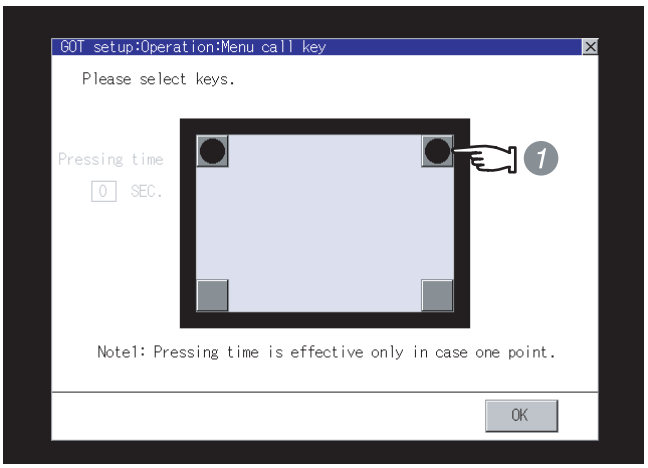
Set the utility call key at [GOT set up] in [System Environment] of GT Designer2.
When change a part of the setting after downloading the project data, change the setting by [Display] screen of the GOT.

☞ GT Designer2 Version □ Screen Design Manual
(3.8 Setting of the GOT display and operation (GOT setup))

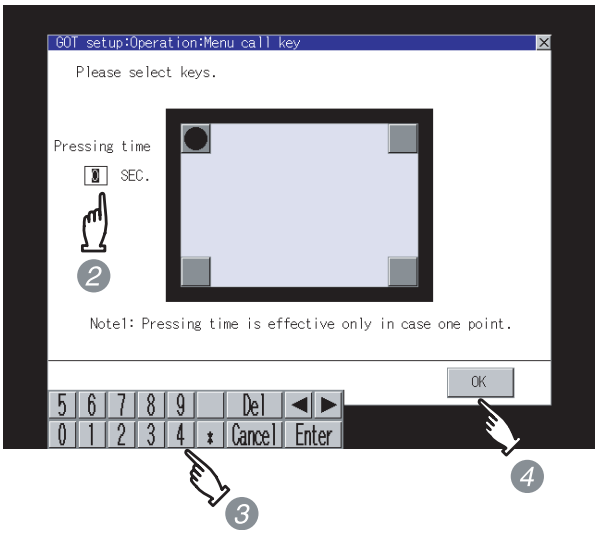
11.5.2 Utility call key display operation



11.5.3 Utility call key setting operation



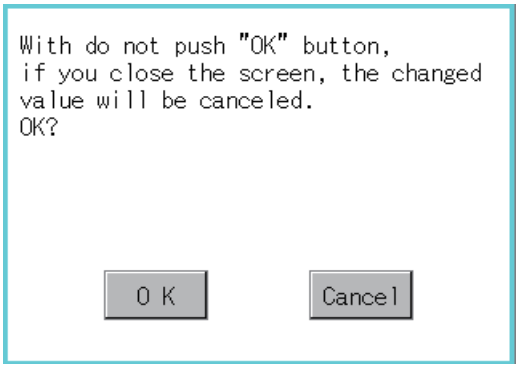
1 Touch ● or □ displayed at the 4 corners of the setting screen.
The button repeats ● ⇄ □ with every touch.
Set the corner to be set to a key position to ●.



2 When setting 1 point, specify time for keeping pressing the key position to switch to the utility.
Touch the time input area.

3 Touching the input area displays a keyboard.
Input numerical value from the keyboard.

4 Touching OK button determines the setting.



5 If touch ☒ button without touching OK button, the dialog mentioned left is displayed.

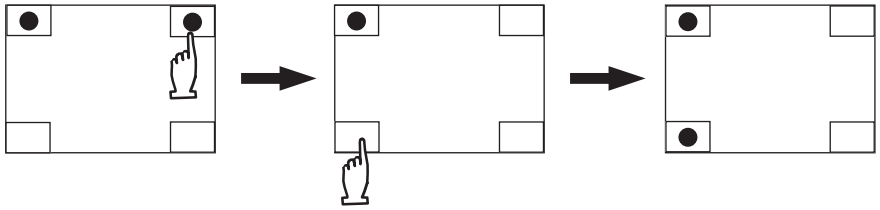
6 If close the display setting and GOT setup screens with ☒ button after completing the setting of all items to change, GOT restarts and reflects the setting contents.

Point

(1) When using GT1595-X
For the key position, 1 point only can be set.

(2) Setting another key position when two ● have been already set
Change either key position from ● to □ before making the setting.
You cannot select three ● at the same time.

Example: Changing the 2 points of the upper left and right corners to those of the upper left and lower left corners.



Change ● at the upper right corner to □.

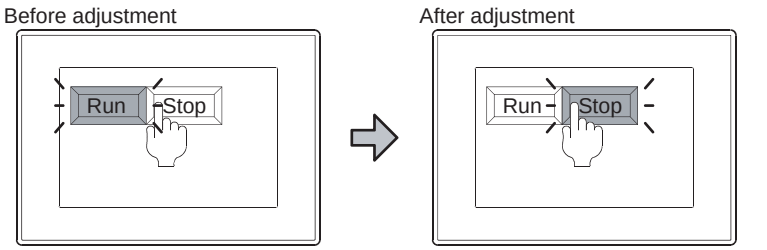
Change □ at the lower left corner to ●.

11.6 Adjusting the Touch Panel Position (Touch panel calibration Setting)

GT1595 -X

11.6.1 Touch panel calibration setting function

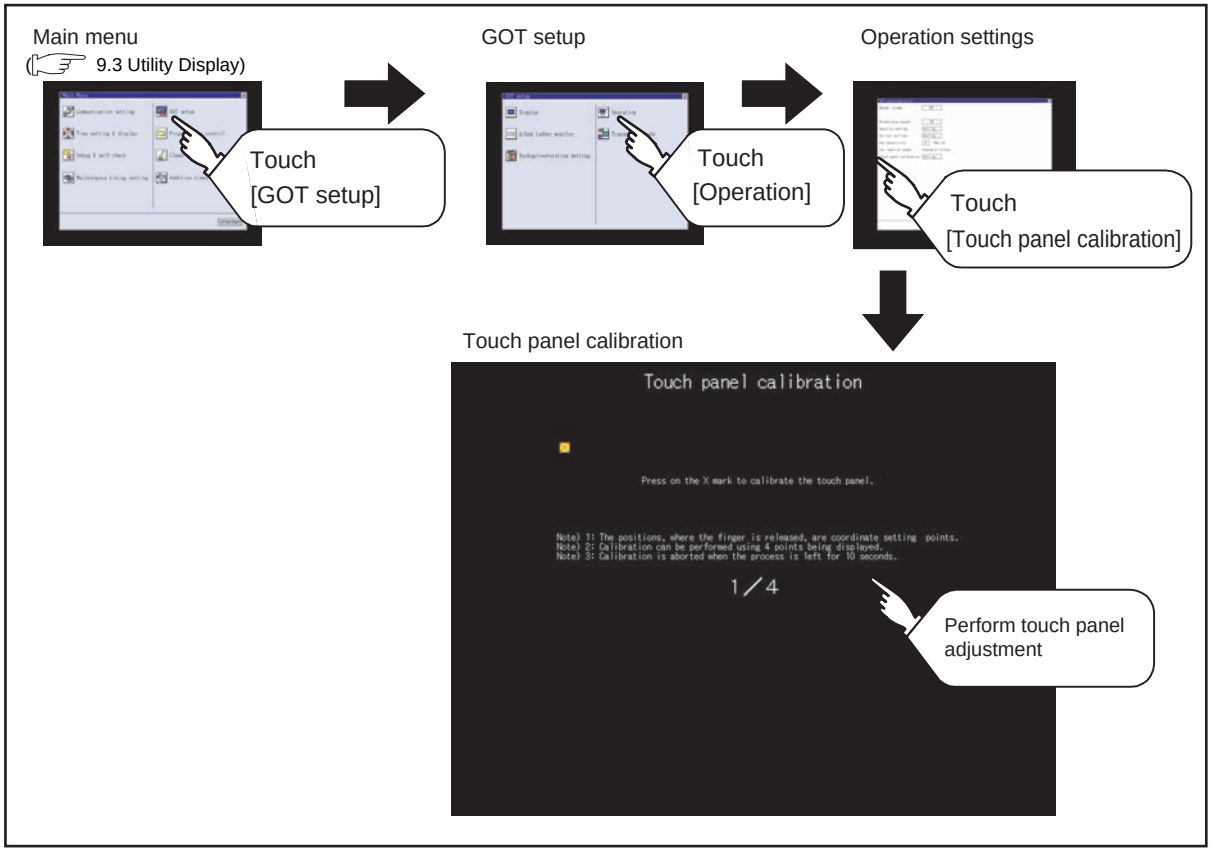
Touch panel reading error can be corrected.
Normally the adjustment is not required, however, the difference between a touched position and the object position may occur as the period of use elapses.
When any difference between a touched position and the object position occurs, correct the position with this function.



The [Run] will operate though you intended to touch the [Stop] button.

The [Stop] button can be touched without fail.

11.6.2 Touch panel calibration setting display operation



11.6.3 Touch panel calibration operation

Touch the ☒ point displayed on the screen with the finger one by one to make the setting.



1 Touch the ☒ point displayed on the upper left.
Be sure to touch the center of the ☒ precisely.



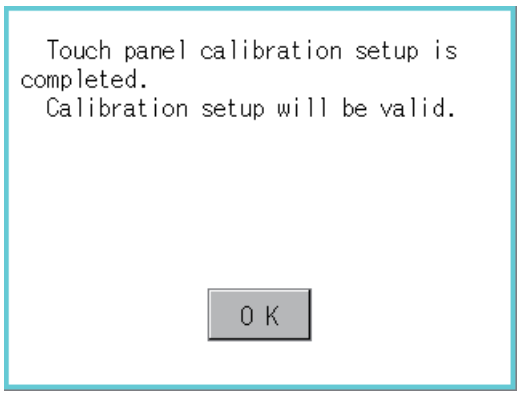
2 Touch the ☒ point displayed on the upper right.



3 Touch the ☒ point displayed on the lower left.



4 Touch the ⊠ point displayed on the lower right.



5 When the setting is completed, the message shown left is displayed. Touching the OK button returns to the previous screen.

11.7 Q/QnA Ladder Monitor

11.7.1 Q/QnA ladder monitor setting function

Storage locations and others for data to be used for the ladder monitor function can be set.
Saving the ladder data cuts out the need for reading the ladder data from PLC CPU at the next GOT start-up, enabling to start the ladder monitoring earlier.
Refer to the following manual for details of the ladder monitoring function.

☞ GOT1000 Series Extended/Option Functions Manual

Function	Description	Setting range
Data save location	Select the ladder data storage location of the Q/QnA ladder monitor.	C: Flash Memory/B: Memory card/A: Built-in CF Card/Not store <Default: C: Flash Memory>
Automatic program read	Whether to automatically read sequence program when the ladder monitor starts from a touch switch or Advanced Alarm Display can be selected.	YES/NO <Default: YES>
Priority comment	If both Common comment and Each program comment are set for the same device in a sequence program, select either of the comments to be displayed in the ladder monitor.	Common comment/Each program comment <Default: Common comment>
Local device monitor	Select if monitoring local devices are executed or not when monitoring devices with the ladder monitor. (Applicable to only the MELSEC-Q series ladder monitor)	YES/NO <Default: NO>
Drive for device comment	Select the drive to be used for reading comment data for the ladder monitor.	A:Built-in CF card/B:Memory card <Default: A:Built-in CF card>

Point

(1) Ladder data to be saved

(a) The ladder data to be saved is used by the GOT to execute ladder monitoring.
The ladder data can be saved in the CF card with this function, however it cannot be copied in the PC to be referred/edited with GX Developer, etc.
The name of the ladder data to be stored can be checked with the project information.
For how to check the name of ladder data, refer to the following.

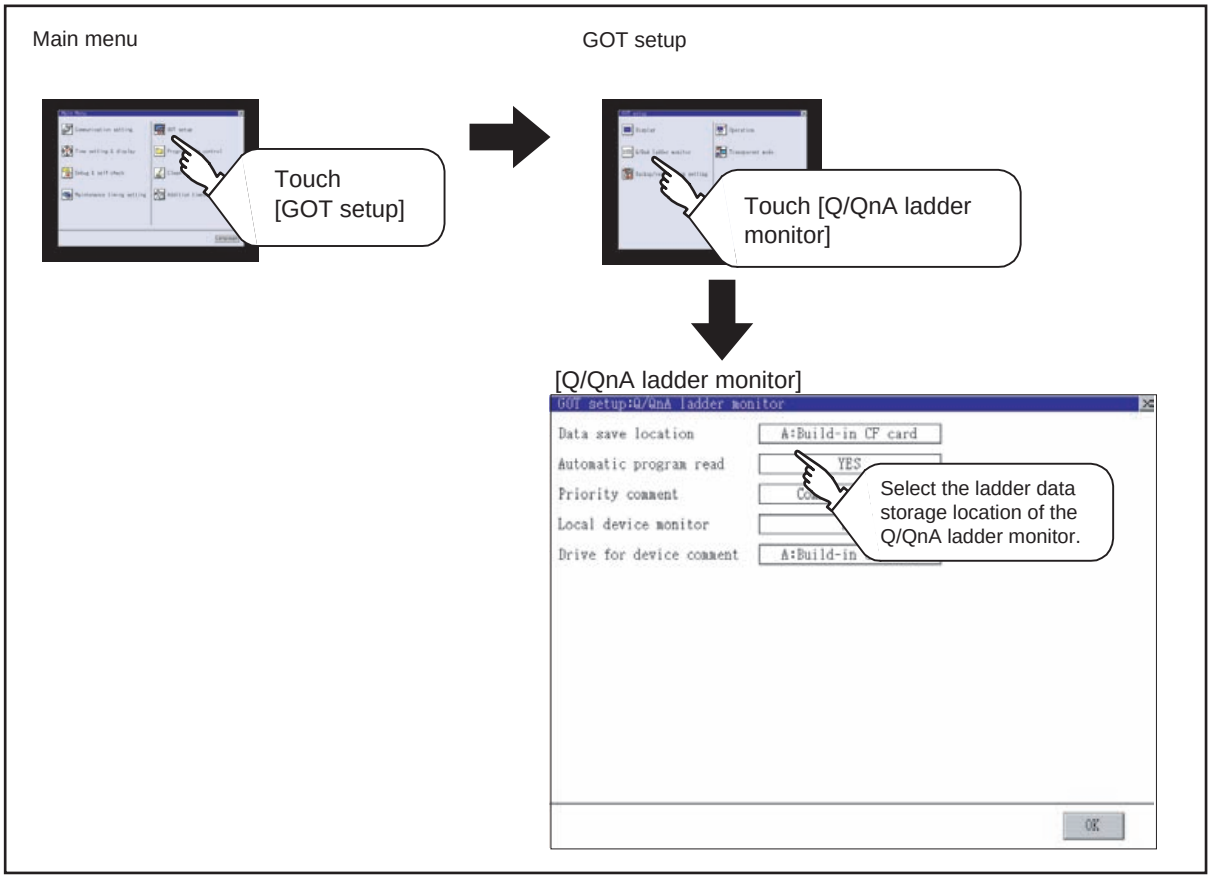
☞ 13.3.2 Display operation of project information

(b) The ladder data saved in the built-in flash memory and memory card (file name: CIRDAT) can be deleted by selecting [Project information] of [Program/Data control].

☞ 13.3.4 Operation of project information

(2) For the GT1555-Q, GT1550-Q
This setting is not provided for these models since they do not support the MELSEC-Q/QnA ladder monitor.

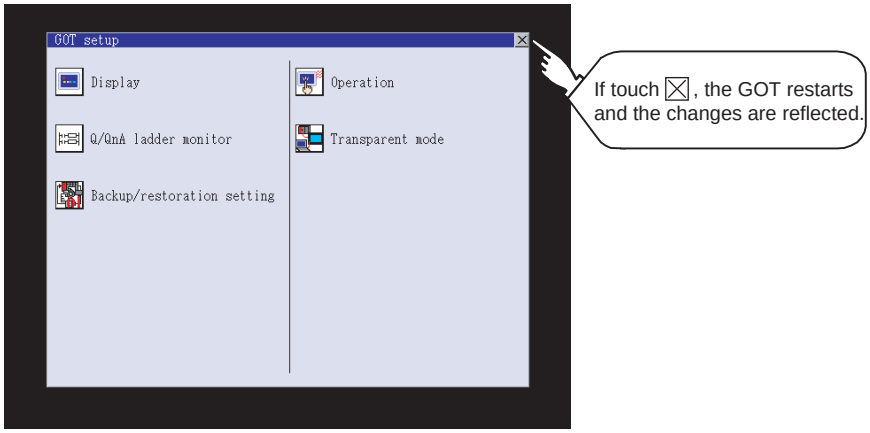
11.7.2 Display operation of Q/QnA ladder monitor



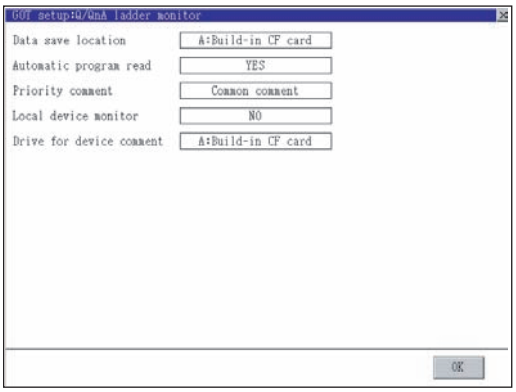
Point

Restart after setting change

If return the display to the GOT setup screen by touching the ☒ button after the setting of each item is changed and touch the ☒ button on the GOT setup screen, the GOT will restart.
After GOT restarts, it is displayed with the changed settings.
If restarted the GOT by powering OFF the GOT without the procedure above, the setting contents are canceled without reflected.

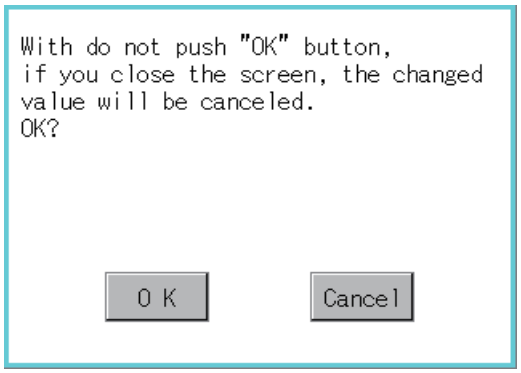


11.7.3 Q/QnA ladder monitor setting operation



1 Setting items are changed if setting item is touched.

2 By touching the OK button, the setting is reflected.



3 If touch ⊠ button without touching OK button, the dialog mentioned left is displayed.

4 Touching the ⊠ button restarts GOT. After restarting, GOT operates with changed value.

11.8 Transparent Settings (Transparent Mode Setting)

11.8.1 Function of the transparent mode

When using the multi-channel function, the channel No. of a controller to which the FA transparent function is executed can be specified.
For the multi-channel function, refer to the following manual.

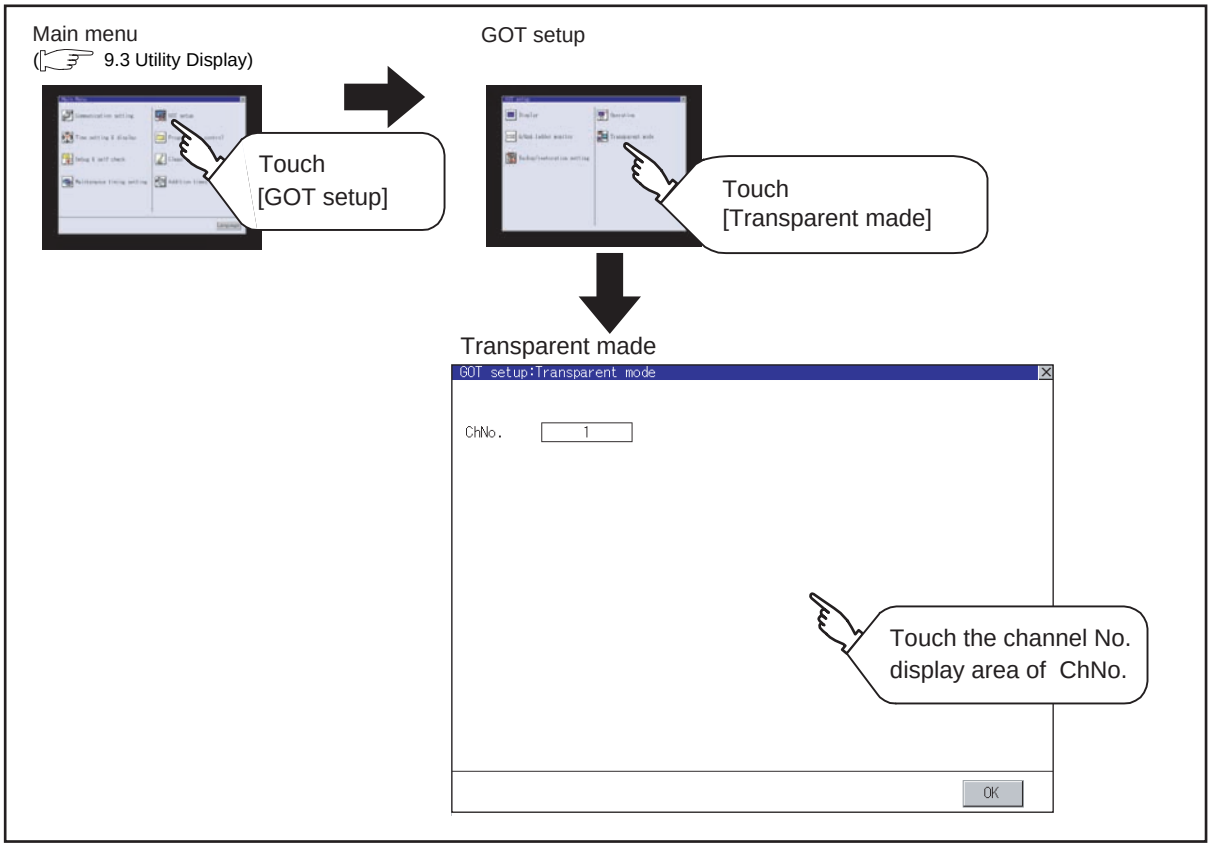
☞GT Designer2 Version ☐ Screen Design Manual (2.8 Multi-channel Function)

Also, refer to the following manual for the FA transparent function.

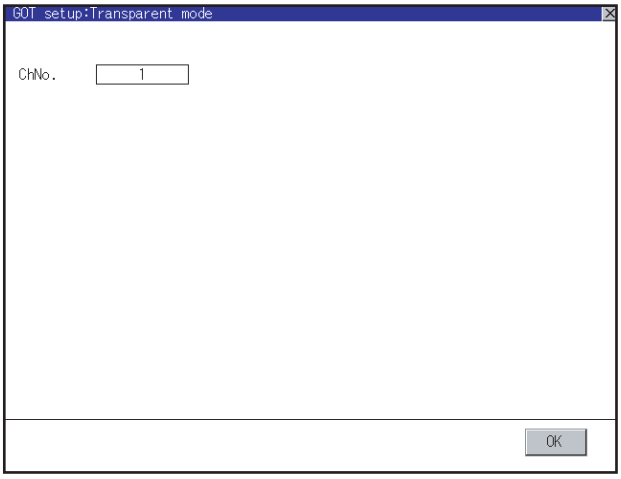
☞GOT1000 Series Connection Manual (33 FA TRANSPARENT FUNCTION)

Function	Description	Setting range	
ChNo.	The channel No. of a controller to which the FA transparent function is executed can be set.	When using other than the GT155☐	1/2/3/4 <Default: 1>
		When using the GT155☐	1/2 <Default: 1>

11.8.2 Displaying the transparent mode

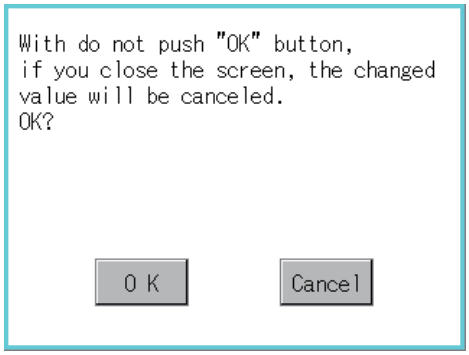


11.8.3 Operation the transparent mode



1 Touching the transparent ChNo. (numerical part) on the left, the keyboard is displayed. Input numerical value by the keyboard.

2 Touching the [OK] button reflects the selected setting.



3 Touching the ⊠ button without touching the [OK] button displays the dialog mentioned left is displayed.

4 If close the display setting and GOT setup screens with ⊠ button after completing the setting of all items to change, GOT restarts and reflects the setting contents.

11.9 Video Unit Settings

11.9.1 Functions of the video unit settings

GT1585 V-S GT1575 V-S

The video input signal and resolution can be selected.

Item	Description	Setting range
Video Unit Settings	The input signal and resolution can be selected.	Input signal: NTSC, PAL <At factory shipment: NTSC> Resolution: 640 × 480, 720 × 480* <At factory shipment : 640 × 480>

*: Only when PAL is selected

Point

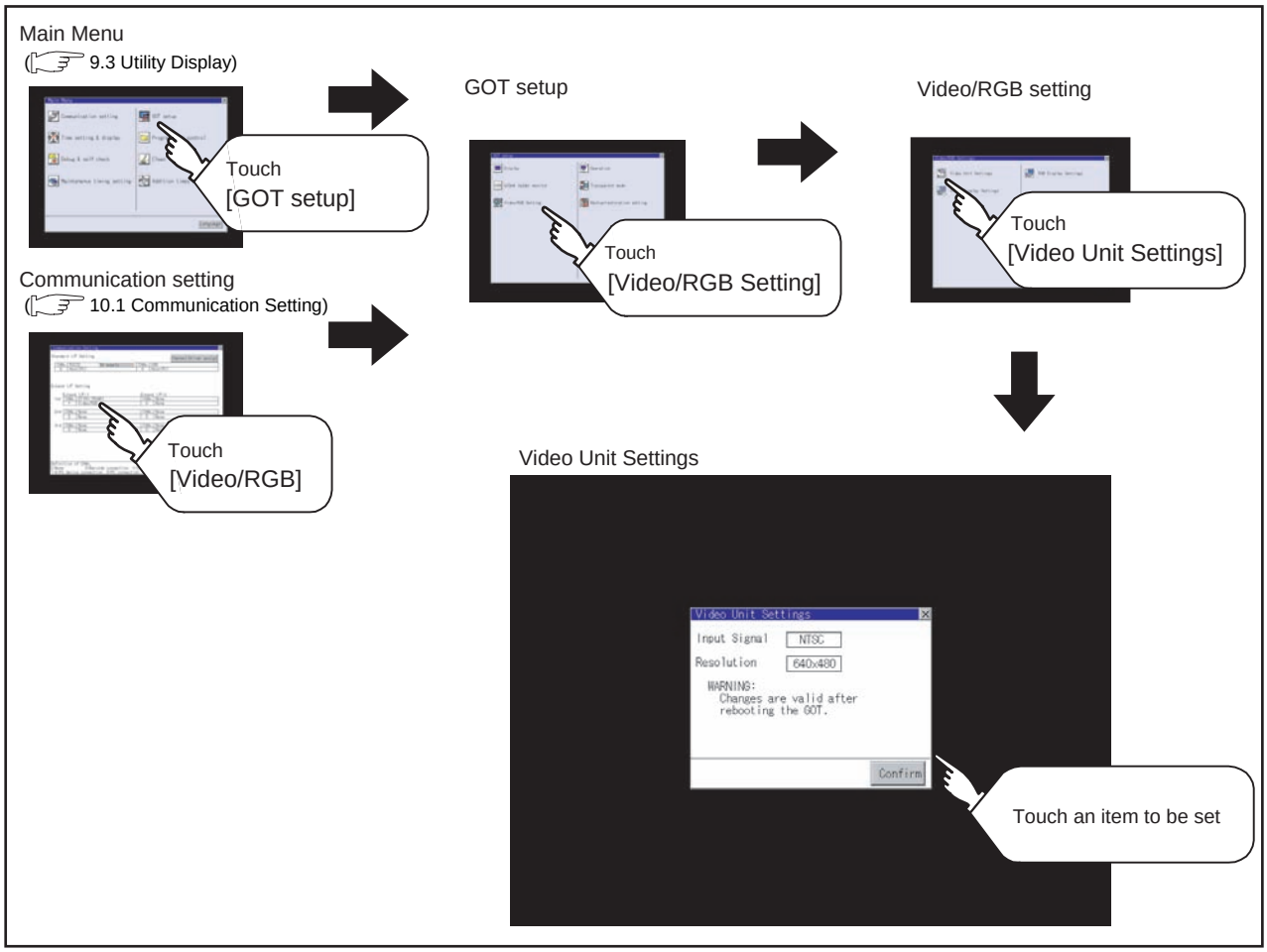
Input signal settings

Set the input signal as follows according to the output format for the video camera or the like connected.

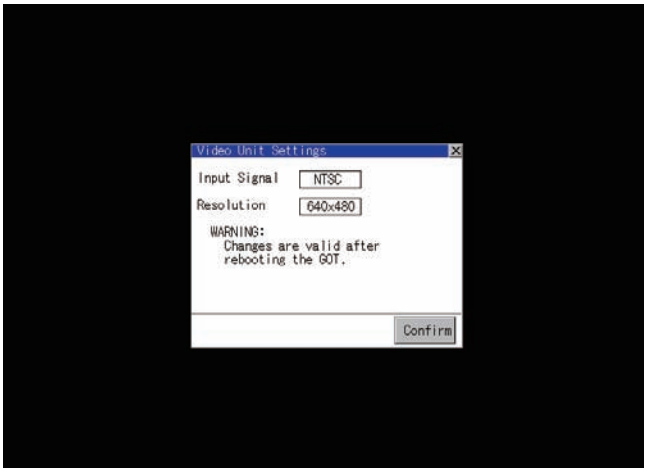
If the settings made differ from these, video images may not be displayed correctly.

Output format for video camera or the like	Input signal setting
NTSC format	NTSC
PAL format	PAL
EIA format	NTSC
CCIR format	PAL

11.9.2 Displaying the video unit settings



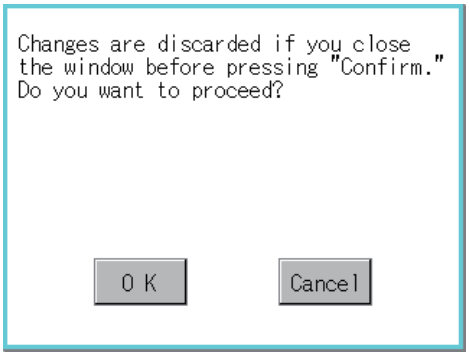
11.9.3 Operating the video unit settings



1 When you touch the setting item, the setting contents change.

Input signal :PAL
NTSC
Resolution :720 × 480
640 × 480

2 When you touch the Confirm button, the setting contents are determined.



3 If you touch the ⊠ button without touching the Confirm button, the dialog box on the left is displayed.

4 After completing the settings for all the items you want to change in [Video Unit Settings], when closing [Video Unit Settings] and [Video/RGB Setting]/ [Communication Setting] with the ⊠ button, the GOT is restarted, and the new setting contents are reflected.

11.10 Video Display Settings

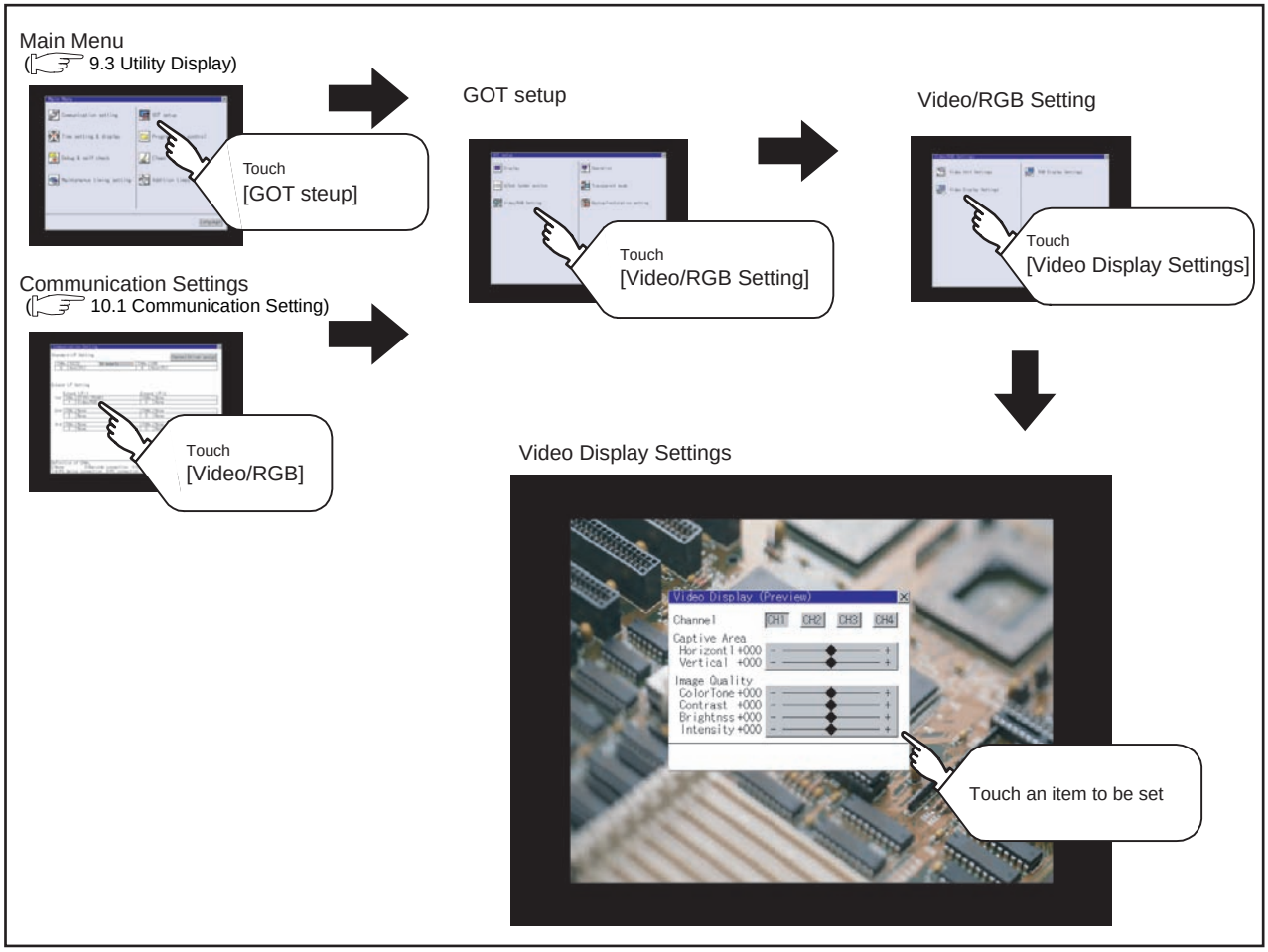
11.10.1 Functions of the video display settings



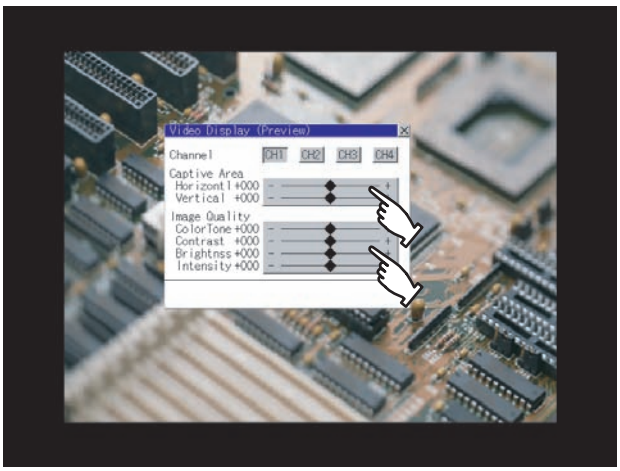
The target for the video settings and the preview channel can be selected and the captive area and image quality can be set.

Item	Description	Setting range
Video Display Settings	The target for the video settings and the preview channel can be selected and the captive area (in the horizontal direction and vertical direction) and image quality (color tone, contrast, brightness, color intensity) can be set. The captive area and image quality can be set for each channel.	Channel 1/2/3/4 <At factory shipment : 1> Captive area Horizontal: -100 to 100 <At factory shipment: 0> Vertical: -100 to 100 <At factory shipment: 0> Image Quality and Color Tone: -100 to 100 <At factory shipment: 0> Contrast: -100 to 100 <At factory shipment: 0> Brightness : -100 to 100 <At factory shipment: 0> Intensity : -100 to 100 <At factory shipment: 0>

11.10.2 Displaying the video display settings



11.10.3 Operating the video display settings

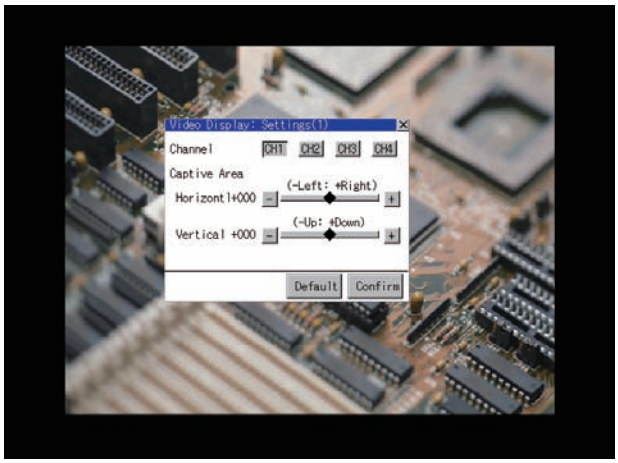


1 Select a video channel No. to be displayed. The video image for the selected channel No. is previewed.

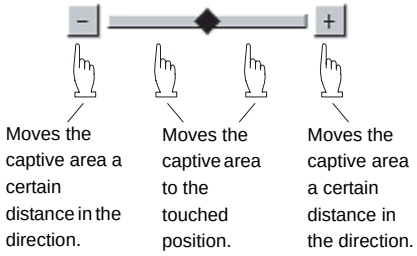
2 To change the captive area or image quality, touch the display section of each item.

Captive Area : Refer to 3 to 6.

Image Quality : Refer to 7 to 10.

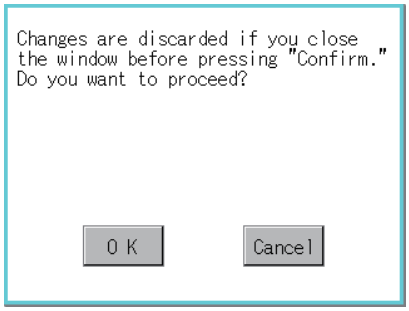


3 The captive area (horizontal direction/ vertical direction) for the selected channel No. can be changed.



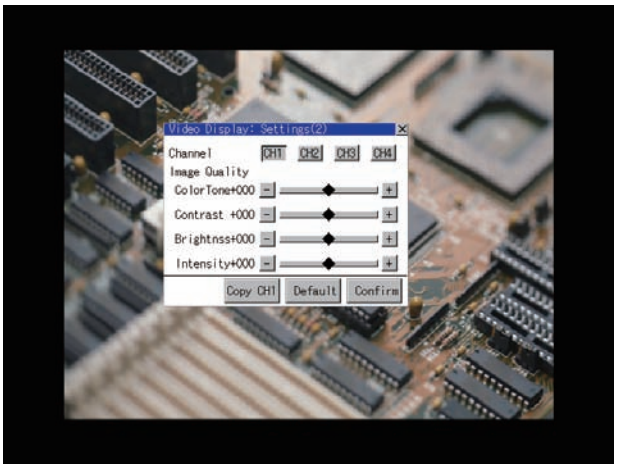
Touching [Default] returns to the default status.

4 When touching the [Confirm] button, the setting contents are determined.

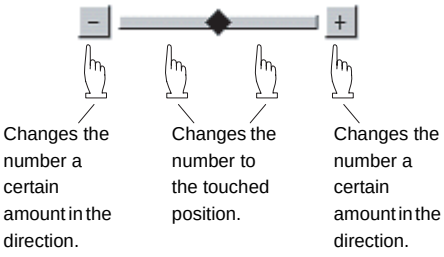


5 If you touch the [×] button without touching the [Confirm] button, the dialog box on the left is displayed.

6 After completing all the items to set, if you touch the [×] button, the display returns to the preview screen 1.



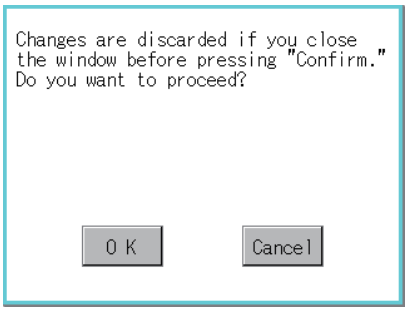
7 The image quality (color tone, contrast, brightness, color intensity) for the selected channel No. can be changed.



Touching [Default] returns to the default status. When touching [Copy CH1], the image quality (color tone, contrast, brightness, color intensity) for the selected channel No. is matched with the image quality settings for Channel No. 1 ([CH1]).

8 When touching the [Confirm] button, the setting contents are determined.

9 If you touch the [×] button without touching the [Confirm] button, the dialog box on the left is displayed.



10 After completing all the items to set, if you touch the [×] button, the display returns to the preview screen 1.

11 After completing the settings for all the items you want to change in the video display settings, when closing [Video Display (Preview)] with the [×] button, the display returns to [Video/RGB Setting].

Point Precautions for setting

Incorrect settings may disrupt or stop the video image.
(If this happens, returning the settings to their default values restores normal display.
This phenomenon depends on the video camera or other device connected.
Use setting values that provide proper display.

11.11 RGB Display Settings

11.11.1 Functions of the RGB display settings

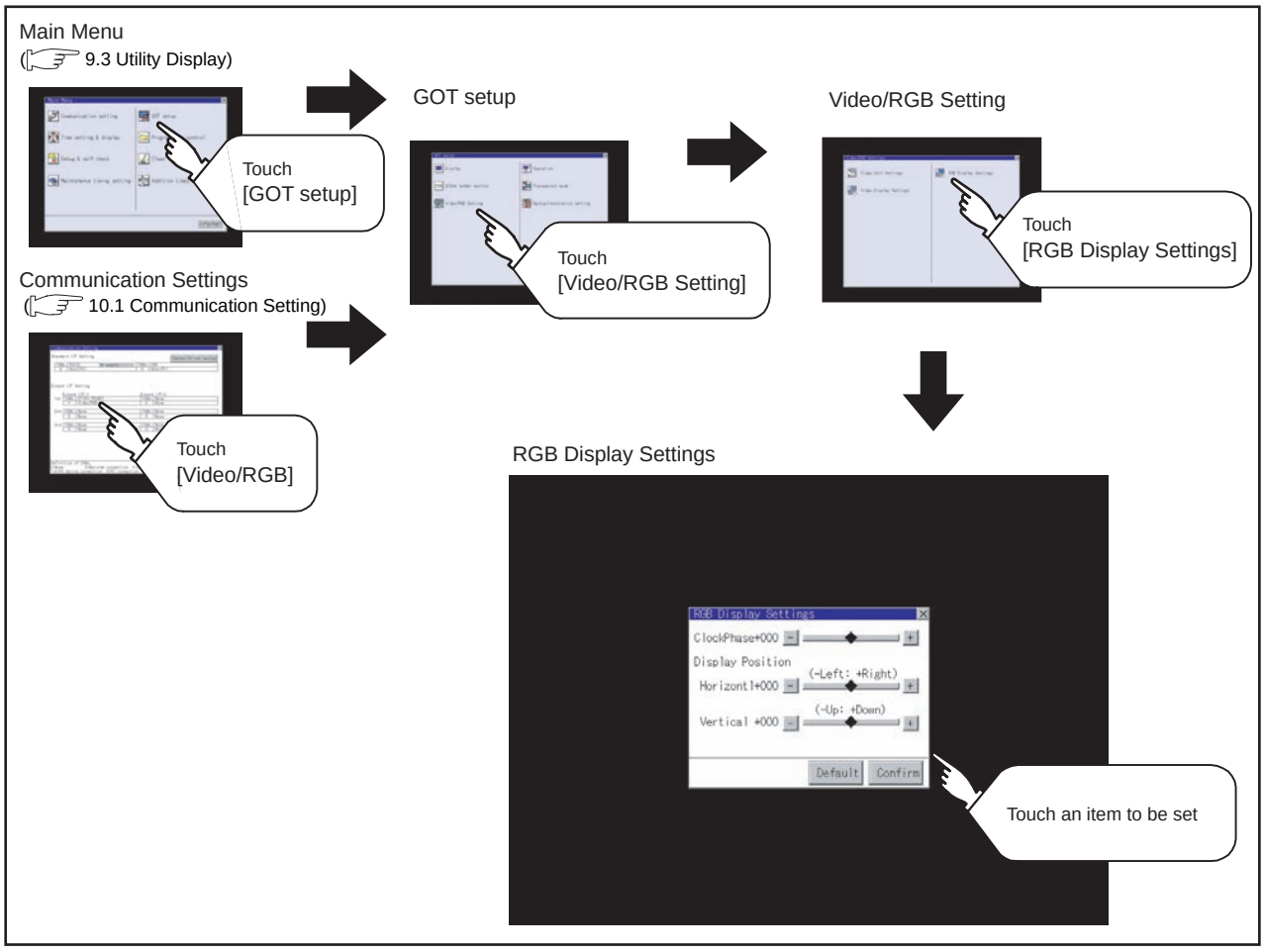
GT1585 V-S GT1575 V-S

The RGB clock phase and screen position can be set.

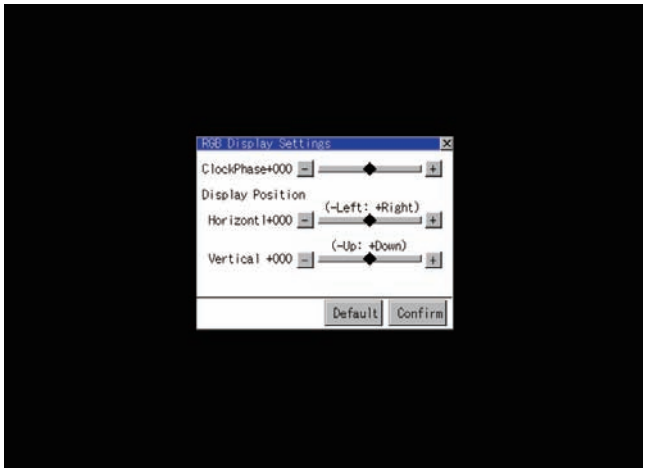
Item	Description	Setting range
RGB Display Settings	The RGB clock phase* and screen position (horizontal direction and vertical direction) can be set.	ClockPhase: -100 to 100 <At factory shipment: 0> Display position Horizontal: -100 to 100 <At factory shipment: 0> Vertical: -100 to 100 <At factory shipment: 0>

*: Adjust when a noise is displayed along the horizontal direction or characters are blotted or the contours are unclear.

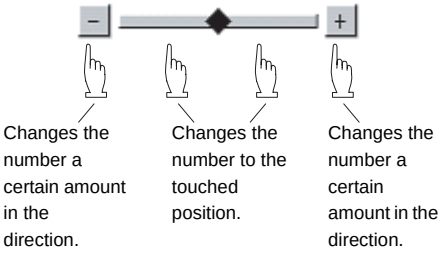
11.11.2 Displaying the RGB display settings



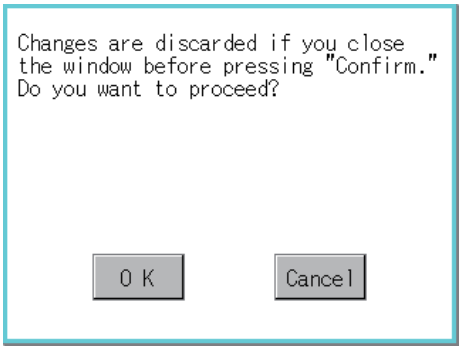
11.11.3 Operating the RGB display settings



1 The clock phase and screen display position (horizontal direction/vertical direction) can be changed.



2 When touching the Confirm button, the setting contents are determined.



3 If you touch the ⊠ button without touching the Confirm button, the dialog box on the left is displayed.

4 After completing all the items to set, if you touch the ⊠ button, the display returns to [Video/RGB Setting].

Point

Precautions for setting

If the value for [Horizontal] or [Vertical] is too large, RGB display may not be performed or the display may be disrupted or stopped.
If this happens, return the settings to their default values and make settings in the range where RGB display is possible.

11.12 Backup/Restore Settings

11.12.1 Backup/restore function

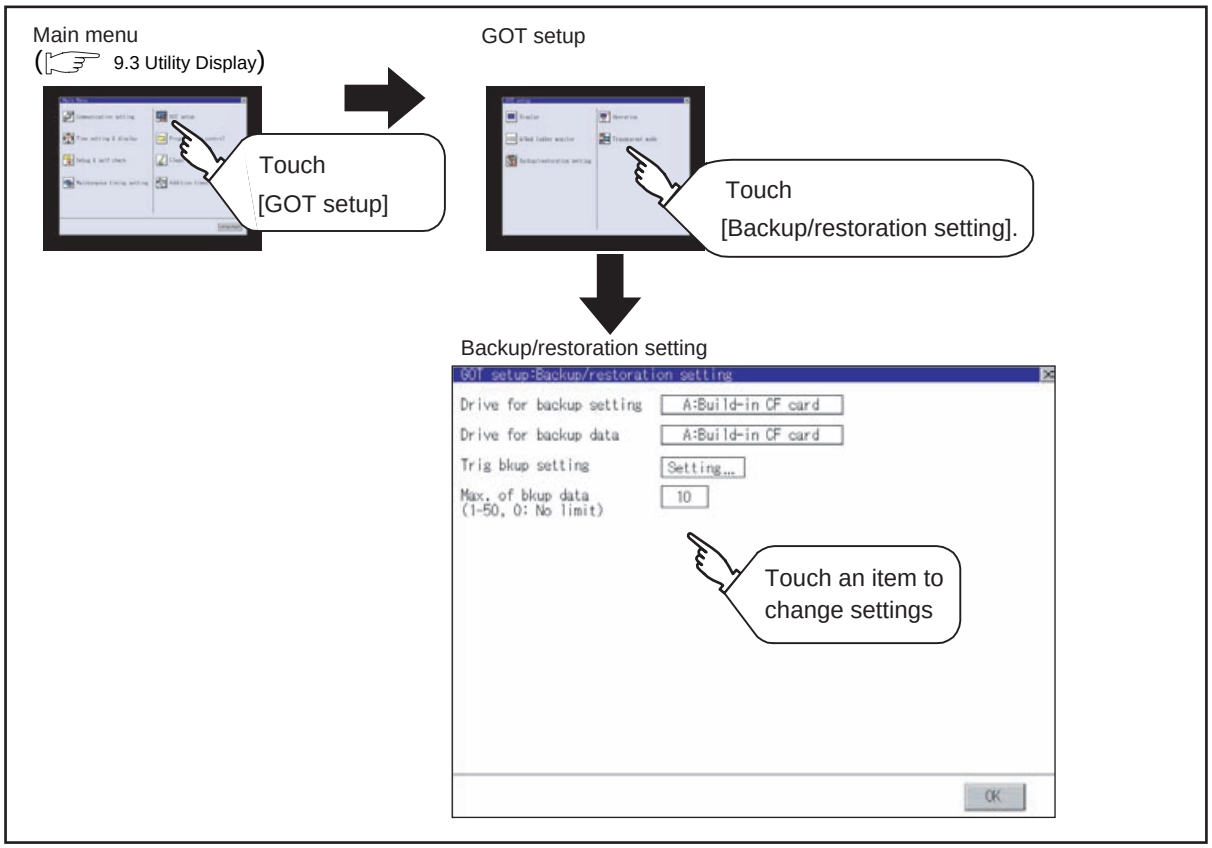
The storage location for backup data can be set.
For how to use the backup/restore function, refer to the following manual.

☞ GOT1000 Series Extended/Option Functions Manual (11 Backup/restore)

Set the following items with touching the items on the GOT.

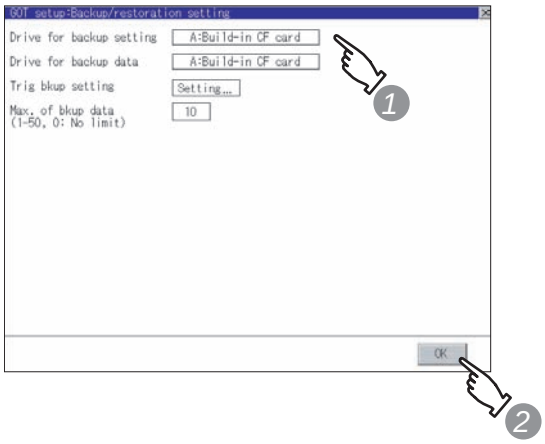
Function	Description	Setting range
Drive for backup setting	The drive for storing backup settings, including parameters and passwords for controllers, can be selected.	A: Standard CF Card B: Memory card <Default: A: Standard CF Card>
Drive for backup data	The drive for storing backup data can be selected.	A: Standard CF Card B: Memory card <Default: A: Standard CF Card>
Trigger backup setting	The GOT automatically backs up data when triggers (Rise, Time) specified for each backup setting are met.	None/Rise/Time <Default: None> ☞ 11.13 Trigger backup setting
Max. of backup data	Set the maximum number of backup data to be stored. (When 0 is specified, the GOT does not check the number of backup data to be stored.)	Setting range: 0 to 50 <Default: 10>

11.12.2 Display operation of backup/restoration setting



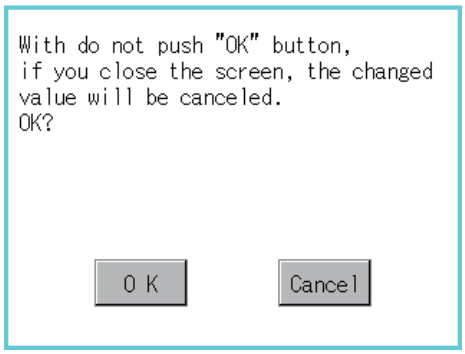
11.12.3 Backup/restoration setting operation

1 Drive for backup setting, drive for backup data



1 Touch a setting item, and then the setting is changed.

2 Touch the [OK] button, and then the setting is reflected.



3 Touch the ⊠ button without touching the [OK] button, and then the dialog box shown left is displayed.

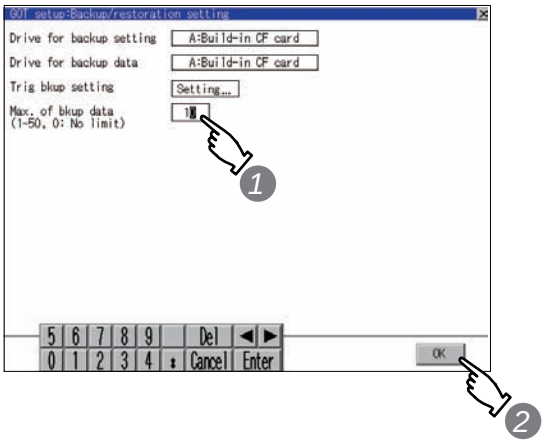
4 After all settings in the backup/restoration setting are completed, end the backup/restoration setting and GOT setup with touching the ⊠ button, and then the settings are reflected.

2 Trigger backup setting

For operations of the trigger backup setting, refer to the following.

☞ 11.13 Trigger backup setting

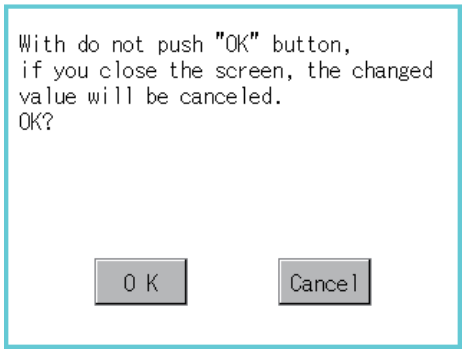
3 Max. number of backup data



1 Touch the setting item, and then a keyboard appears.
Input values with the keyboard.

Setting range: 0 to 50, Default: 10
(When 0 is specified, the GOT does not check the number of backup data to be stored.)

2 Touch the OK button, and then the setting is reflected.



3 Touch the ☒ button without touching the OK button, and then the dialog box shown left is displayed.

4 After all settings in the backup/restoration setting are completed, end the backup/restoration setting and GOT setup with touching the ☒ button, and then the settings are reflected.

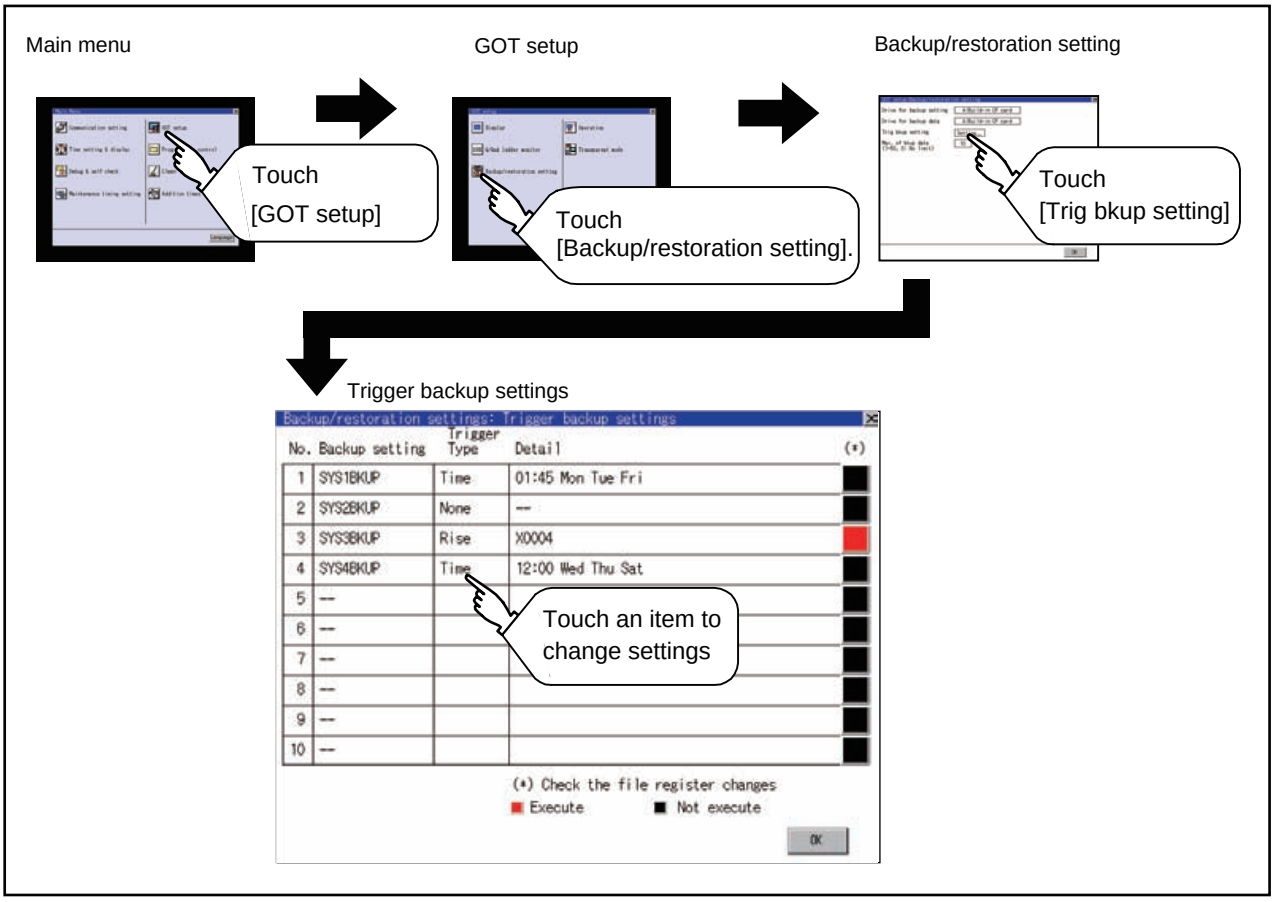
11.13 Trigger Backup Settings

11.13.1 Trigger backup settings

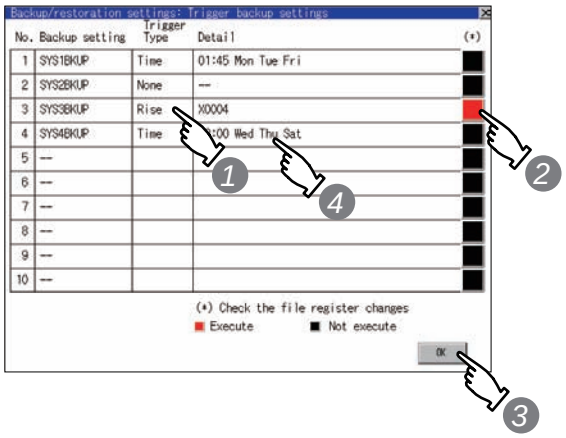
When the conditions of the trigger specified for each backup setting (Rise, Time) are met, the GOT automatically backs up data.
How to use the trigger backup, refer to the following manual.

☞GOT1000 Series Extended/Option Functions Manual (11 Backup/restore)

11.13.2 Display operation of trigger backup setting



11.13.3 Trigger backup setting operation



1 Touch a setting item for the trigger type, and then the setting is changed.

(None Rise Time)

None : The GOT does not execute the trigger backup.

Rise : The GOT backs up data when the trigger device turns on.

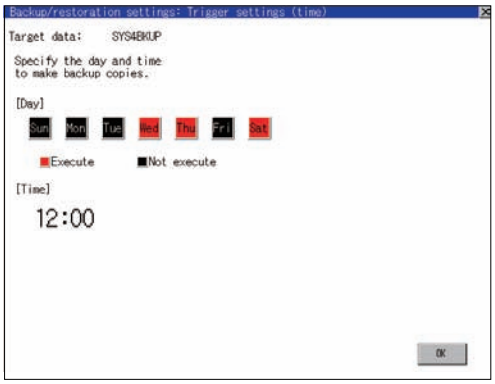
Time : The GOT backs up data at the specified time.

2 Touch a setting item for [Check the file register changes], and then the setting is changed.

Execute : When the backup is executed, the GOT checks if data stored in file registers are changed after the previous backup. When the data are changed, the GOT backs up the changed data.

Not execute : When the backup is executed, the GOT does not back up data stored in file registers even if the data are changed after the previous backup.

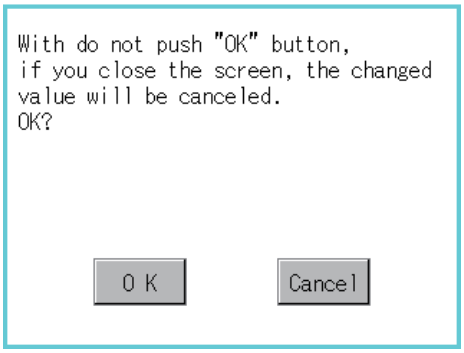
3 When the trigger type is changed, a password input window appears by touching the OK button.
Input the password for the backup/restore. When the password is verified, the settings are reflected, and then the screen returns to the trigger backup setting screen.
When the trigger type is not changed, touching the OK button reflects the settings.



4 When the trigger type is set to [Time], touch a setting item for [Detail] and the screen is switched to the trigger time setting screen.
In the screen, specify the days and time that the GOT executes the backup.

Day : Select days that the GOT executes the backup by touching displayed items. Multiple days can be selected.

Time : Set the time that the GOT executes the backup by touching the displayed item.



5 Touch the ⊠ button without touching the OK button, and then the dialog box shown left is displayed.

6 After all settings in the backup/restoration setting are completed, end the backup/restoration setting and GOT setup with touching the ⊠ button, and then the settings are reflected.

Point

Precautions for setting

When the trigger type is set to [Rise], set the trigger device with GT Designer2 in advance.
Failure to do so disables the backup setting with [Rise] set.

12. CLOCK SETTINGS AND BATTERY STATUS DISPLAY (TIME SETTING AND DISPLAY)

The clock display setting items and the time when displayed the setting screen are displayed.
(While displaying clock and the seting screen, the display time does not change.)
The voltage status of the built-in battery is also displayed.

12.1 Time Setting and Display

12.1.1 Time setting and display functions

Time settings and displaying of the status of GOT built-in battery are possible.

Function	Description	Reference page
Clock setting	Setup the method to adjust the time between GOT clock data and clock data of controller connected to the GOT.	12-3
Clock display	Carry out the display and setup of GOT clock data.	12-5
GOT internal battery voltage status	Displays GOT internal battery voltage status.	12-6

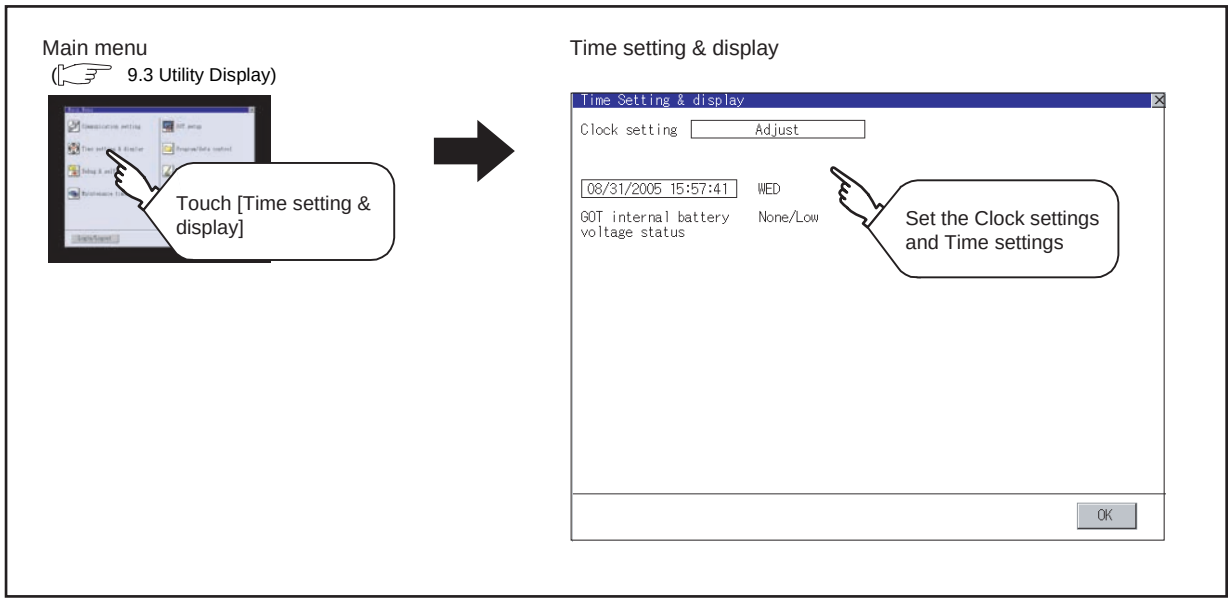
Point

Changing times

When the time is changed on the Time setting & display screen, the changed time is written in a programmable controller even though [Adjust] or [Broadcast] is set for [Clock setting].
As a result, the time of the programmable controller can be changed on the GOT even though [Adjust] is set for [Clock setting].
(The clock data of the controller set as [Adjust CH No.] of [Clock data GOT is matched to clock data External (Adjust)] in [System Environment] ([Clock Setting]) is changed.)

For details of [Adjust] and [Broadcast], refer to the following manual.
☞ GT Designer2 Version□ Screen Design Manual

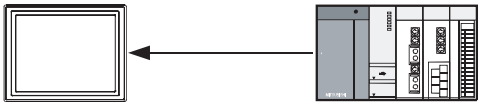
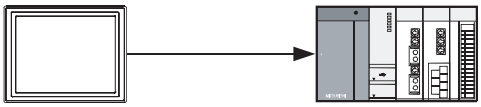
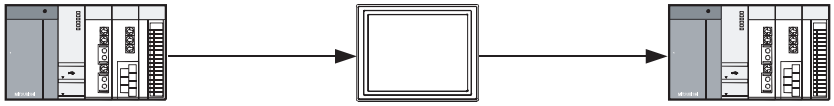
12.1.2 Display operation of clock display and setting

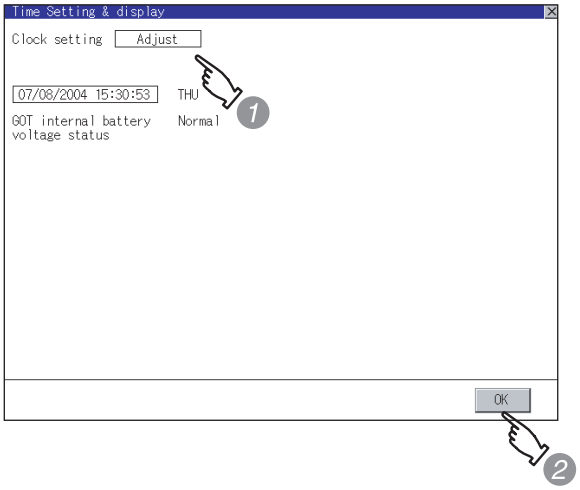


12.1.3 Operating the time setting & display

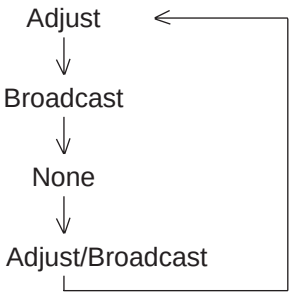
1 Clock setting

Setup the method to adjust the time between GOT data and the clock data of controller connected to the GOT.

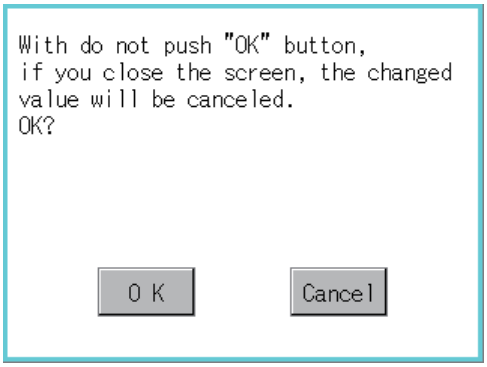
Setting	Description
Adjust	Adjust the time of GOT clock data to the clock data of controller.  Same as setting in [GOT setup] in [System Environment] of GT Designer2. GT Designer2 Version □ Screen Design Manual (2.5 Clock Function)
Broadcast	Adjust the time of controller clock data to the clock data of GOT.  Same as setting in [GOT setup] in [System Environment] of GT Designer2. GT Designer2 Version □ Screen Design Manual (2.5 Clock Function)
None	No adjustment of clock data.
Adjust/Broadcast	Adjust the GOT and controllers to the controller whose clock data is used as a base.  It is same as set in the GOT setup in System Environment of the GT Designer2. GT Designer2 Version□ Screen Design Manual (2.5 Clock Function)



1 If touch the setup item, the setup contents is changed.



2 If touch OK button, the setup contents is reflected.



3 If touch ☒ button without touching OK button, the dialog mentioned left is displayed.

4 If touch ☒ button, GOT restarts. After restart, GOT operates with the changed settings.

Point

(1) When connecting to an external device which does not have clock function
If set to [Adjust] or [Broadcast] for clock setting while the GOT is connected to external devices (PLC or microcomputers) which do not have clock function, the clock data will not be adjusted.
Refer to the following for the list of PLC installed with clock function.

☞ GT Designer2 Version□ Screen Design Manual
(2.5.3 PLC CPUs with clock function)

(2) Clock setting when using the multi-channel function
The channel No. of a controller whose clock is used as a base or adjusted cannot be set by the utility.
The controller whose clock is used as a base or adjusted can be set by GT Designer2.
For channel settings, refer to the following.

☞ GT Designer2 Version□ Screen Design Manual
(2.5.1 Synchronizing clock data between GOT and PLC CPU)

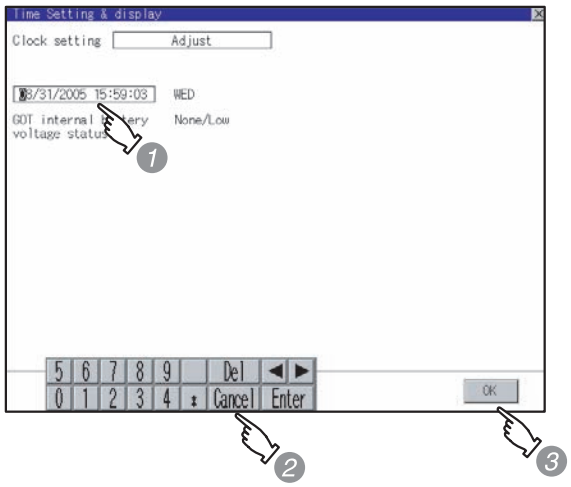
(3) Setting of clock setting and battery
The battery is not installed in GOT at purchase. When select [Broadcast] or [None] in clock setting, set the clock of the GOT once with installing the optional battery to the GOT.

(4) Operation setting by GT Designer2
Carry out the setting of clock setting in [GOT set up] in [System Environment] of GT Designer2.
To change a part of the setting after downloading the project data, change the setting at the display setting of GOT.

☞ GT Designer2 Version□ Screen Design Manual
(3.8 Setting of GOT Display and Operation (GOT Setup))

2 Clock display

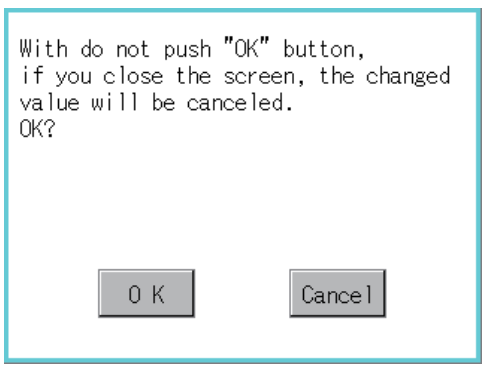
Carry out the display and seting of GOT clock data.
The setup methods of clock data are shown below.



1 If touch the clock display section, the keyboard for input is displayed and the clock update stops.

2 Input time with the keyboard by referring to the table below. Input the scheduled time when the operation of 3 is to be carried out since the input time is reflected at the time of the operation of 3.
The day of the week is displayed automatically according to the input date.

Key	Description
0 to 9	Input numeric value in cursor position.
◀ / ▶	Move the cursor.
Del	Move the cursor to the left by one character when Del Key is touched while inputting year, month, day, time, minutes, seconds. Carry out nothing when touched other than when inputting the above.
Enter	Close the keyboard after the input time is displayed in clock display. The update of the clock display does not restart even if the keyboard is closed. The update of the clock display restarts with the operation of 3.
Cancel	Cancel the input time and returns the time of clock display to the time at which the keyboard was displayed and close the keyboard. The update of the clock display does not restart even if the keyboard is closed. The update of the clock display restarts with the operation of 3.



3 If touch OK button, the setting contents are reflected and the clock display update re-starts.

4 If touch ☒ button, the GOT restarts if the clock settings is changed, or the screen closes if clock settings is not changed.
If touch ☒ button without touching OK button, the dialog shown left is displayed and the changed contents are cancelled and the screen is closed.

3 GOT internal battery voltage status

Displays battery voltage status.

Display	Status
Normal	Normal
Low/None	Low voltage

When the battery voltage is low, replace the battery immediately.
Refer to the following for battery replacement procedure.

☞ 8.11 Battery

13. FILE DISPLAY AND COPY (PROGRAM/DATA CONTROL)

OS, project data (screen data) or alarm data which is written in the GOT or memory card can be displayed and data can be transferred between GOT and memory card.
The format of the memory card is also possible.

13.1 Data Storage Location

13.1.1 Drive name allocation

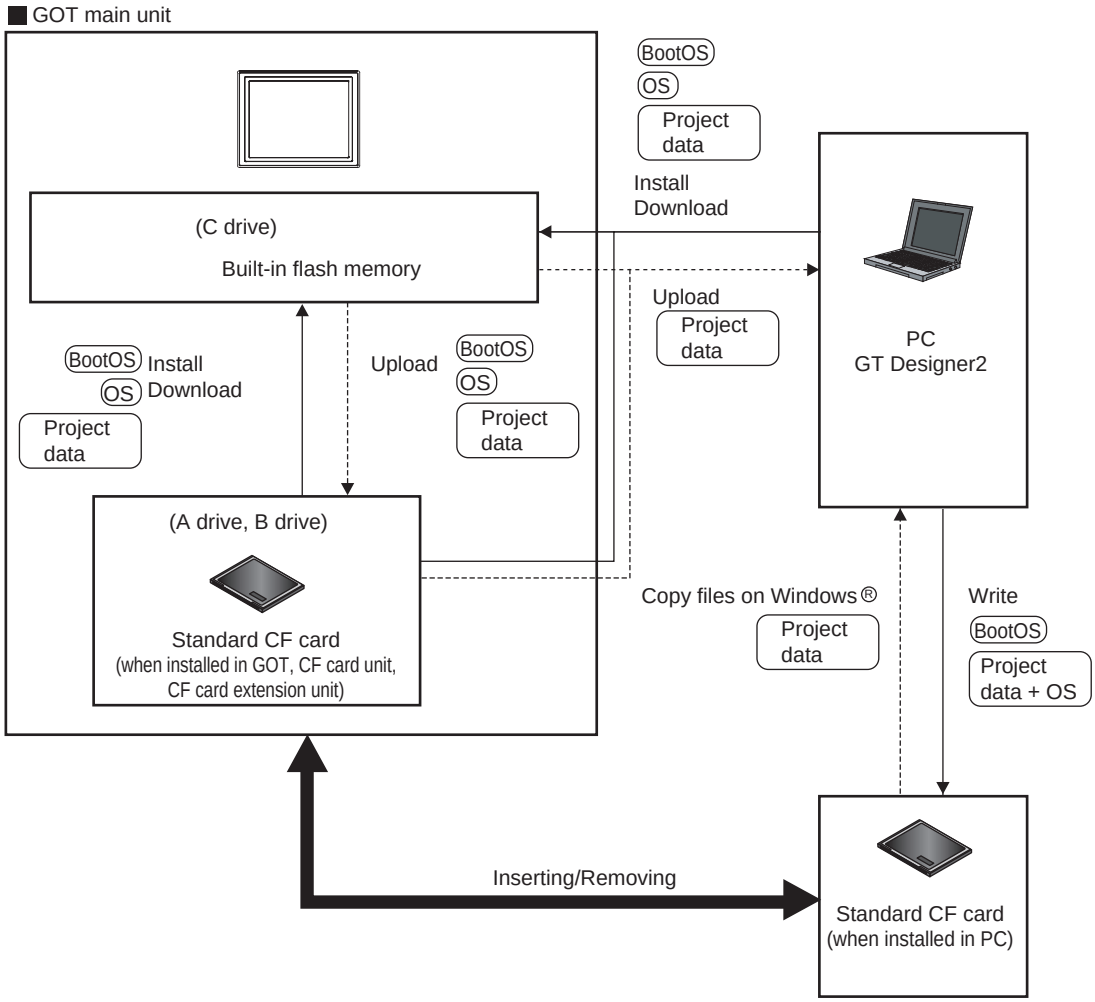
For the GOT built in flash memory or standard CF card, the following drive names (A drive, B drive, C drive) are allocated.

Drive name	Allocation
A drive	Standard CF card
B drive	Extended memory card
C drive	Built in flash memory

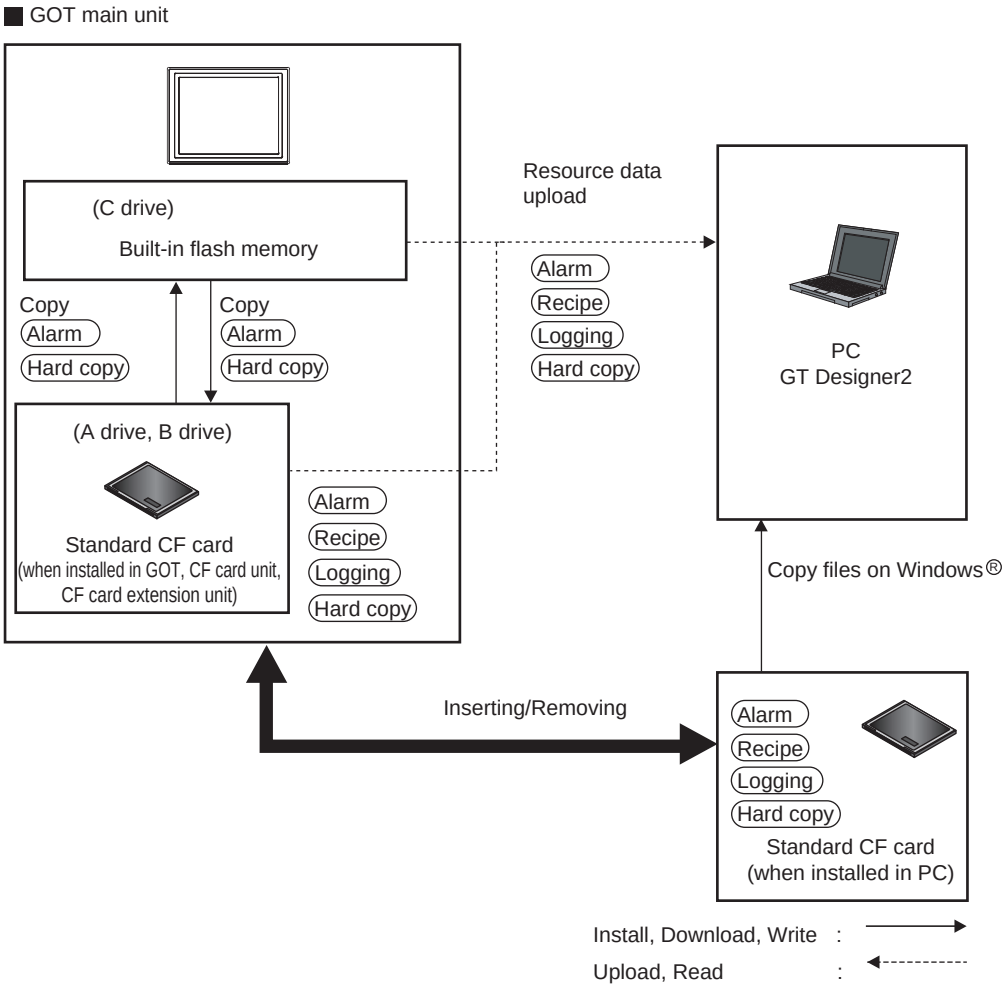
13.1.2 Data type and the storage location

1 System

The data storage location and transferring (write/read) route for each data type are shown below.



2 At maintenance



The data of the build in flash memory (Project data, etc.) can be saved even if the battery voltage becomes low.

Item	Data type	Storage location
BootOS	BootOS	· Built in flash memory (C drive)
OS	Standard monitor OS	
	PLC communication driver	
	Extended function OS	
	Option OS	
Project data	Project data (Including recipe setting, alarm conditions, time action, and GOT setup.)	· Standard CF card (A drive) · Extended memory card (B drive) *1 · Built-in flash memory (C drive) *1
Alarm	Alarm data (Extended alarm log file and alarm log file)	· Standard CF card (A drive)
Recipe	Recipe data (Advanced recipe file, Recipe file)	
Logging	Logging (Logging file)	
Hard copy	Image file (Hard copy function)	

*1 When using the project data stored in the Standard CF Card (A drive) or extended memory card (B drive) with the GOT, hold the CF card installed to the GOT.

13.1.3 OS version confirmation

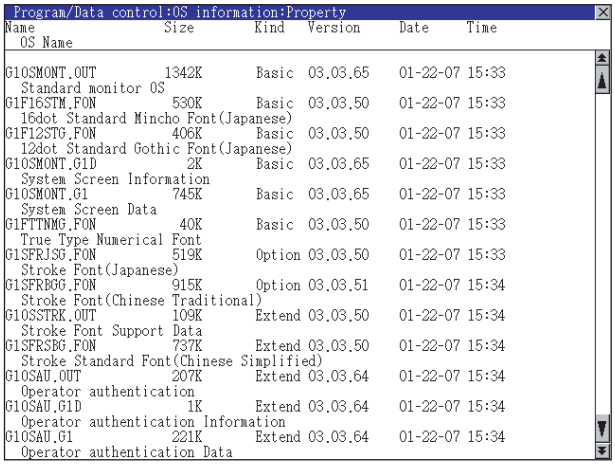
Confirm the OS version carefully when install BootOS and standard monitor OS.
When OS is installed, GOT checks and compares the OS version automatically.

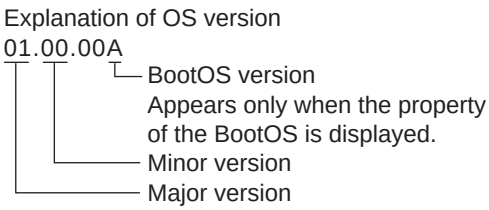
(1) When install BootOS
When the BootOS to be installed has the older major version, GOT displays the installation disapproving message to cancel the installtion so that the older version may not be written.
(Even when the version of the BootOS to be installed has the same or later version, the version information and the dialog for selecting continue/not continue will be displayed.)
When installing from the standard CF card, the dialog is displayed by the main unit.
When installing from GT Designer2 via USB or RS-232, the dialog is displayed by the GT Designer2.

(2) When install standard monitor OS, communication driver, option OS
When standard monitor OS, communication driver, or option OS has already been installed, the version information of the OS which has been installed and the dialog for selecting continue/not continue will be displayed.
Moreover, when the different versions will coexist amoung all OSs (standard monitor OS, communication driver, and option OS) by installing OS, the installation disapproving dialog will be displayed and the installation process is canceled.

(3) When download project data
GOT automatically compares the version between the project data to be downloaded and the installed OS.
When the versions are different, the dialog confirming whether to install the OS together is displayed.
When downloading the project data from the memory card, storing the project data and OS beforehand is recommended.

The version of each OS installed in the GOT can be confirmed by [Property] of [OS information] screen.





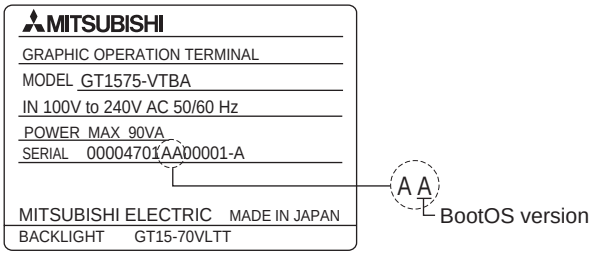
Refer to the following for details of the screen display operation.

☞ 13.2 OS Information

Point

Version confirmation of BootOS by rating plate

Confirm the version of BootOS installed in the GOT at product shipment by rating plate of GOT rear face.



13.1.4 Capacity confirmation of the project data downloading location

When download the project data, confirm the capacity of the user area in the drive to which transferred, the transferred project data size, the transfer size and buffering area size of the optional function OS in advance to judge whether to carry out the download.
The capacities can be confirmed by GT Designer2.
Refer to the following for details.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(8.1.2 Drive capacity required for data transfer)

13.1.5 Display file

The display screen and storage destination for each type of data are shown below.
The file name and contents of each data can be displayed with property display of the utility.

Item		Display screen	Storage destination (Drive name/folder name)
BootOS		OS information screen	A drive/B drive/C drive:\G1BOOT*2
Standard monitor OS	Standard monitor OS system screen data		A drive/B drive/C drive:\G1SYS*2
	Standard monitor OS system screen management information file		
	Standard monitor OS (monitor function)		
	6 × 8-dot font (ASCII characters)		
	24-dot numerical HQ font		
	32-dot numerical HQ font		
	TrueType numerical font		
	12-dot standard font		
	16-dot standard font		
Extended function OS			
Option OS			
Communication driver			
Project data*1		Project information screen	A drive/B drive/C drive:\PROJECT1*2*3
	User-created screen data		
	Comment data		
	12-dot HQ fonts (Mincho/Gothic)		
	16-dot HQ fonts (Mincho/Gothic)		
	TrueType (Mincho/Gothic)		
Resource data	Advanced alarm log file CSV file *4	Alarm information screen	A drive/B drive:\ With GT Designer2, any folder name or file name can be specified.*2
	Advanced alarm log file TXT file *4		
	Advanced alarm log file binary file *4		
	Alarm log file CSV file*4		
	Hard copy file BMP file*4	Hard copy information screen	
	Hard copy file JPG file*4		
	Advanced recipe file CSV file *4	Advanced recipe information screen	
	Advanced recipe file TXT file *4		
	Advanced recipe file binary file *4		
	Operation log file CSV file *4	Operation log information screen	
	Operation log file TXT file *4		
	Operation log file binary file *4		

*1 The user-created screen data, comment data, and font data are displayed as project data.

*2 Each folder is created automatically when a file is installed, downloaded, or uploaded.

*3 The folder names and file names can be set at [System Settings] in [System Environment] of GT Designer2 .

☞ GT Designer2 Version □ Screen Design Manual (3.1 GOT/Controller Type Setting)

*4 A serial number is automatically added to file names.

13.2 OS Information

13.2.1 Function of OS information

Each file name/folder name of BootOS and OS (Standard monitor OS, communication driver and optional function OS) by which each drive (A: Standard CF card, B: Extended memory card, C: Built-in flash memory) holds can be displayed in lists.
Installation and uploading of the files are also possible.

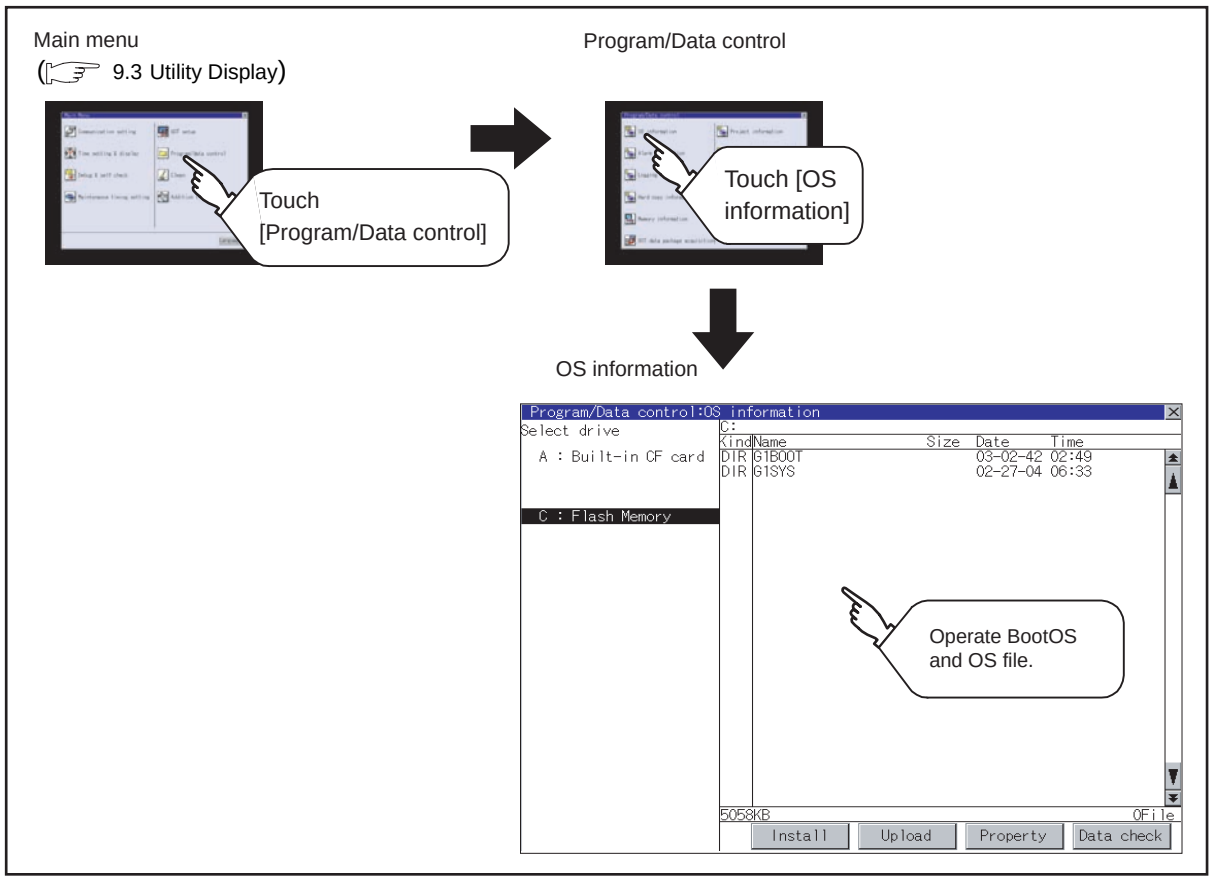
Function	Description	Reference page
Information display of files and folders	Displays the kind, name, data size, creation date and time of the file or folder.	13-10, 13-11
Install	All OS files written in the A drive (Standard CF card) and B drive (Extended memory card) can be installed in the C drive (Built in flash memory).	13-12
Upload	All OS files in the C drive (Built in flash memory) can be uploaded to the A drive (Standard CF card) and B drive (Extended memory card).	13-13
Property display	Displays the property (file name, data size, type, version and creation date) of the file.	13-14
Data check	Data check of files is possible.	13-15

Point

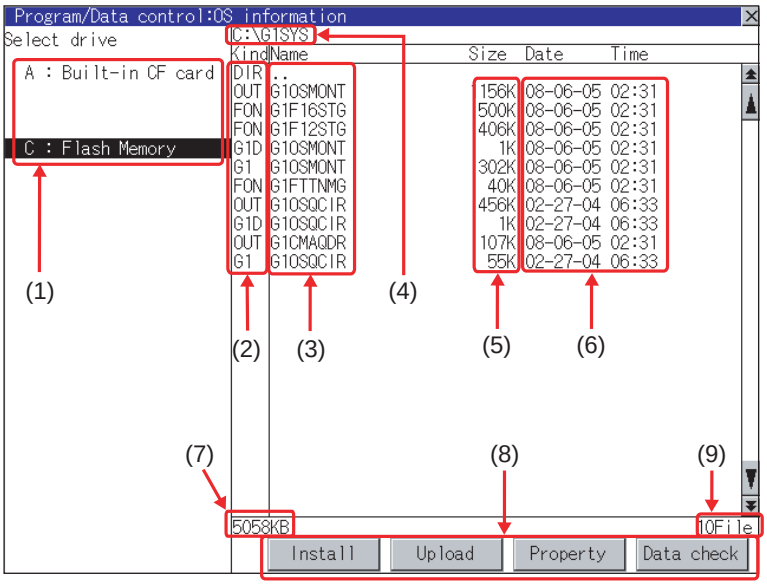
(1) Precautions for installing OS
Installing Boot OS and OS will delete project data in the GOT.
After installing them, install or download necessary data again.

(2) Precautions for operating OS files
When the OS boot drive is set to [A: Standard CF Card], installing and uploading OS files are not available.

13.2.2 Display operation of OS information



13.2.3 Display example of OS information



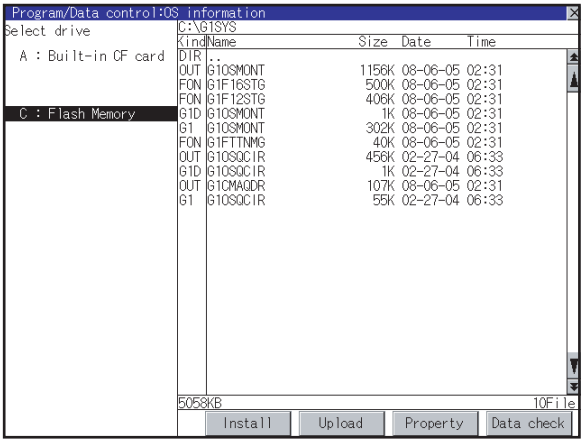
Number	Item	Description
(1)	Select drive	The target drive which displays file or folder can be selected. When the CF card is not installed, [A: Built-in CF Card] / [B: Memory card] are not displayed.
(2)	Kind	Indicates whether the displayed name is for file or folder. In case of file, displays the extension; in case of folder, displays "DIR".
(3)	Name	The file name or folder name which is stored in the selected drive or folder is displayed. When the file name or folder name exceeds 20 characters, the exceeding characters (the 21th character or after) are not displayed.
(4)	Path name	The path name of the currently displayed drive/folder is displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Date and time	The date and time when each file was created are displayed.
(7)	The size of drive	Displays the size in use and the entire size of the drive which is selected by drive selection.(Only the size in use is displayed when selecting the C drive.)
(8)	Operation switch	Execution switch of each function.
(9)	Number of folders and files	Displays the total number of the displayed files and folders.

Remark Displayed folders and files

For the folders and files displayed, refer to the following.

☞ 13.1.5 Display file

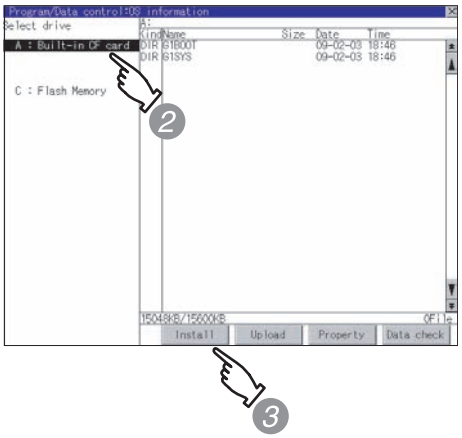
1 Display operation of OS information



1. If touch a drive in [Select drive], the information of the first folder of the touched drive is displayed.
2. If touch a folder name, the information of the touched folder is displayed.
3. If touch a folder name of ". .", the information of the folder in one higher hierarchy is displayed.
4. If touch ▲ ▼ button of the scrollbar, the screen scrolls up/down by one line.
   If touch ⏫ ⏬ button, the screen scrolls up/down by one screen.
5. If touch a file name, the touched file name is selected and inverted.
6. Refer to the following for operation of installation, upload, property, data check.
   - Installation.....☞ this section 2
   - Upload.....☞ this section 3
   - Property.....☞ this section 4
   - Data check.....☞ this section 5
7. Touching ☒ button closes the screen.

2 Installation operation

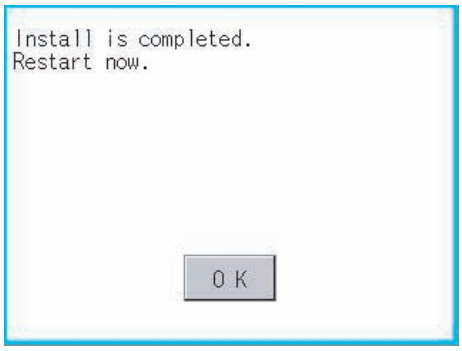
BootOS and OS which are written in the A drive (Standard CF card) or B drive (Extended memory card) can be installed in GOT.
(This item explains using the A drive.)



1 Install the CF card to which the BootOS or OS to install is written to the GOT.
Refer to the following for inserting/removing method of CF card.
☞ 8.8 CF Card

2 Touch [A: Built-in CF Card] for drive selection.

3 Touching Install button starts the install.



4 When the installation is completed, the dialog shown left is displayed.

GOT restarts if touch OK button.

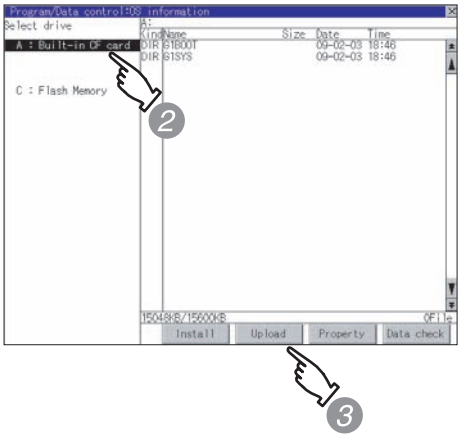
3 Upload operation

BootOS and OS in the C drive (Built in flash memory) can be uploaded to the A drive (Standard CF card).

The CF card after uploading can be used for installing the OS on another GOT.

☞ 18. INSTALLATION OF COREOS, BOOTOS AND STANDARD MONITOR OS.

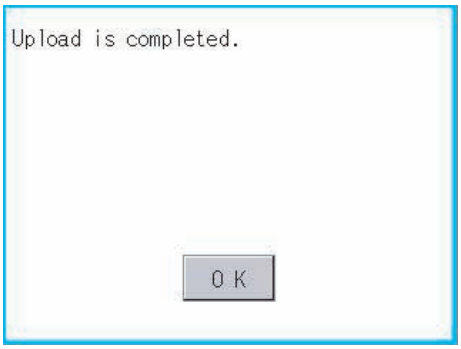
(This item explains using the A drive.)



1 Install the CF card used as the uploading destination to GOT.Refer to the following for inserting/removing method of CF card.
☞ 8.8 CF Card

2 Touch [A: Built-in CF Card] of [Select drive].

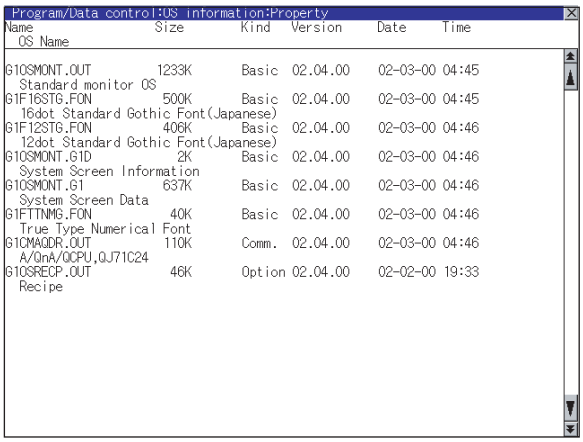
3 Touching Upload starts the uploading.



4 When the upload is completed, the dialog shown left is displayed.
Touching OK closes the dialog.

4 Property display operation

Displays the property of the file stored in the selected folder.



1 If touch [Property] button after selecting the property displaying target folder, the Property display shown left is displayed. In Property display, the following information is displayed for each file selected by 1.

Item	Description
Name	Displays the file name.
Size	Displays the file size.
Type	Displays the following items according to the file type. Boot: BootOS Basic: Standard monitor OS Extend: Extended function OS Option : Optional function OS Comm. : Communication driver
Version	Displays the version of BootOS and OS.
Date and time	Displays the date and time of the file creation.

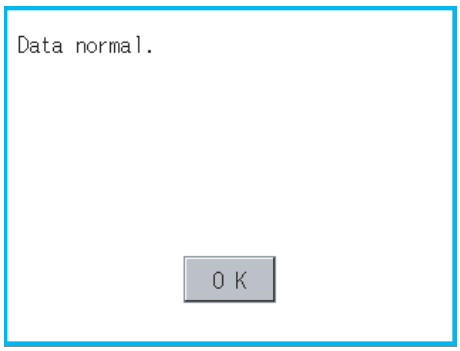
2 If touch [▲][▼] button of the scrollbar, the screen scrolls up/down by one line.
If touch [⏫][⏬] button, the screen scrolls up/down by one screen.

3 Touching [⊠] button returns the screen to the previous screen display.

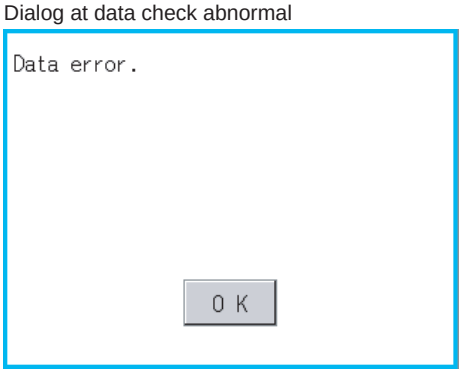
5 Data check operation

Carries out data check of the selected system file.

Dialog at data check normal



Dialog at data check abnormal



1 Touch [Data check] button after selecting a data check target file.
The dialog mentioned left will be displayed after executing data check.

2 Touching [OK] button closes the dialog.

13.3 Project Information

13.3.1 Functions of the project information

The project data files stored in each drive (A: standard CF card, B: Extended memory card, C: built in flash memory) can be displayed by lists.
In addition, the files can be downloaded, uploaded, deleted or copied, etc.

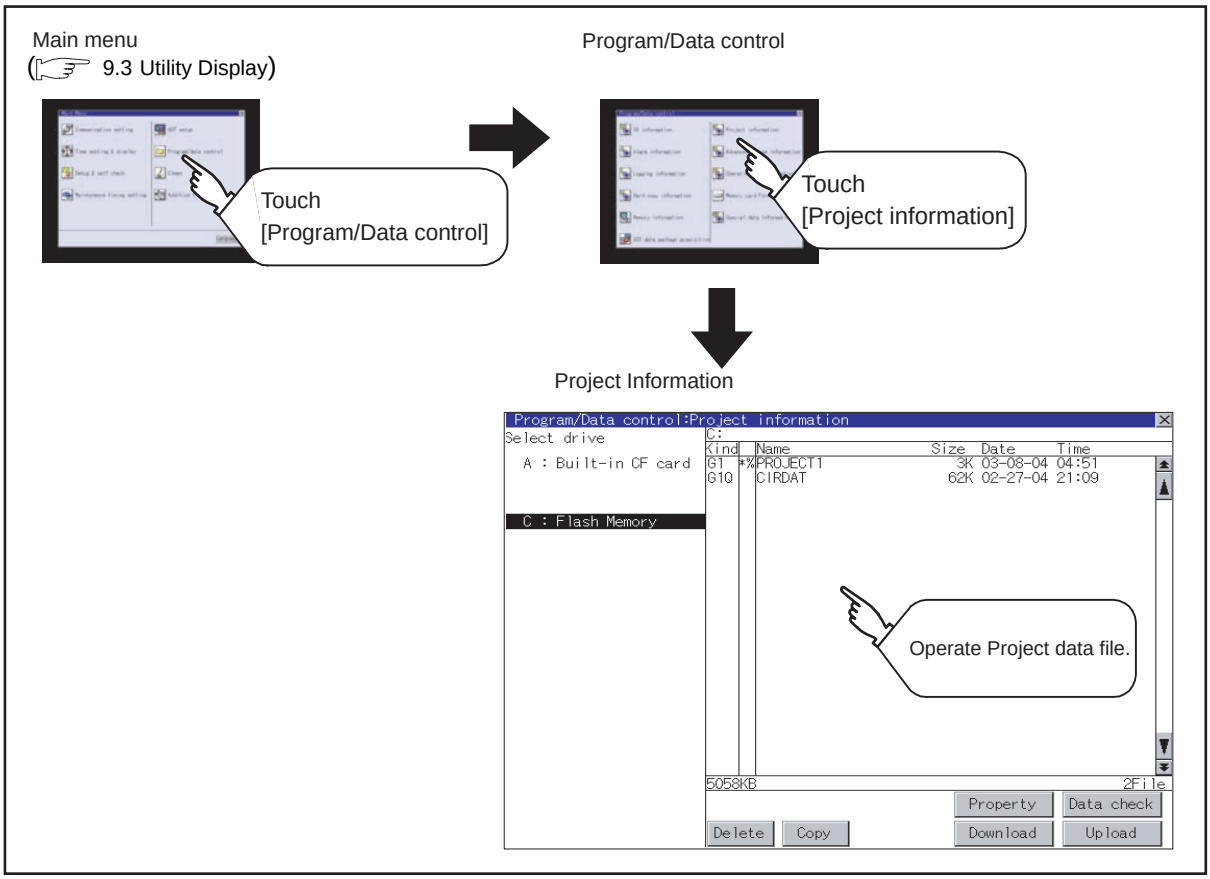
Function	Description	Reference page
Information display of files and folders	Displays the kind, name, data size, the creation date and time of the file or folder.	13-18, 13-19
Delete	Deletes project data.	13-39
Copy	Copies project data. (can copy between the A drive and B drive or in each drive)	13-20
Property display	Displays the project data creation date, author name and the version of GT Designer2.	13-14
Data check	Data check of the file can be executed.	13-15
Download	Downloads the project data written in the A drive (Standard CF card) / B drive (Extended memory card) to C drive (Built in flash memory).	13-23
Setup	The project data to be displayed can be selected.	13-25
Upload	Uploads the project data written in the C drive (Built in flash memory) to the A drive (Standard CF card) / B drive (Extended memory card).	13-26
Setup cancel	Cancels the item which is selected for the project data to be displayed.	13-27

Point

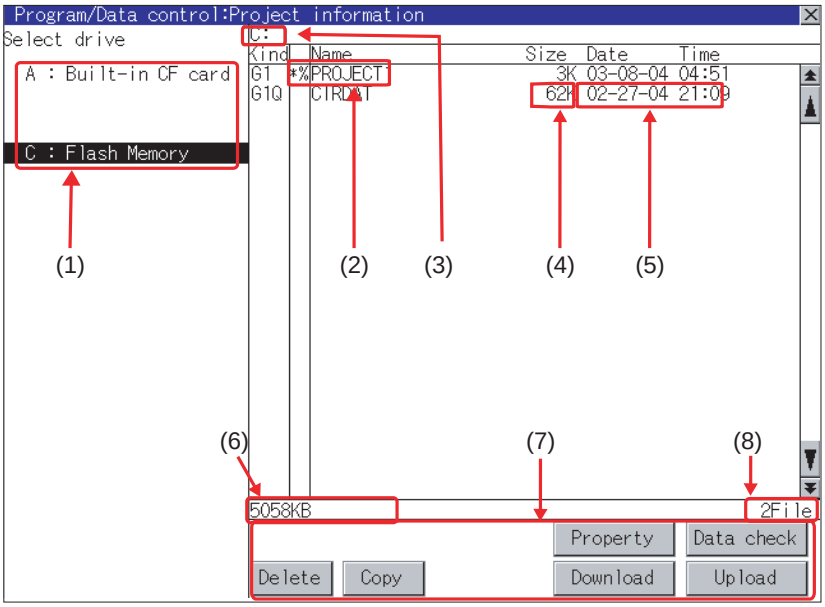
Precautions for operating project data

When the OS boot drive is set to [A: Standard CF Card], deleting, copying, downloading, setting up, and uploading project data are not available.

13.3.2 Display operation of project information



13.3.3 Display example of project information



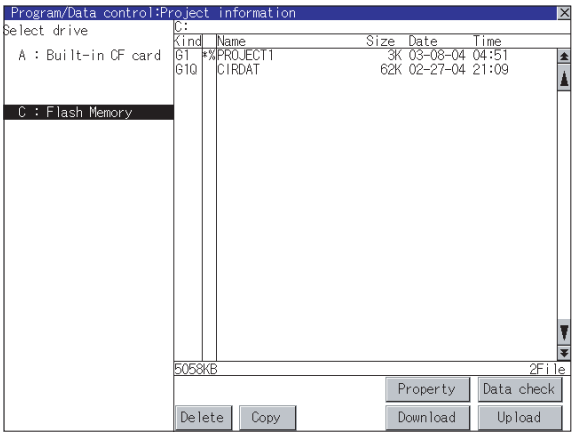
Number	Item	Description
(1)	Select drive	The drive by which a file or folder is displayed can be selected. When the CF card is not connected, [A: Built-in CF card] and [B: Memory card] are not displayed.
(2)	Name	The project data (Project Folder) in the selected drive is displayed. When the name exceeds 18 characters, the 19th and later characters are not displayed. The project data being monitored on the GOT is preceded by "*%".
(3)	Path name	Displays the path name of drive/folder which is currently displayed.
(4)	Size	Displays the size of the file displayed in Name.
(5)	Date and time	Displays the date and time when each file is installed.
(6)	The size of drive	Displays the size in use and the entire size of the drive which is selected by drive selection. (Only the size in use is displayed when selecting the C drive.)
(7)	Operation switch	Displays the execution switch of functions (download, upload, etc.) which can be carried out in [Project information].
(8)	Number of folders and files	Displays the total number of the displayed files and folders.

Remark Displayed folders and files

For the folders and files displayed, refer to the following.

☞ 13.1.5 Display file

1 Display operation of project information



1 Touch the drive in Select drive. The project data in that drive will be displayed.

2 Touch the project data. It is then selected and highlighted.

3 Refer to the following for operation of delete, copy, property, data check, download, upload.

Delete ..... this section 2

Copy ..... this section 3

Property ..... this section 4

Data check ..... this section 5

Download, setup ..... this section 6

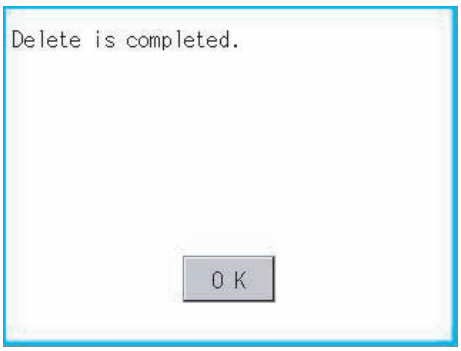
Upload, setup cancel ..... this section 7

4 Touching ⊠ button closes the screen.

2 Delete operation

This operation deletes the selected file.





1 Touch and select the file to delete.

2 Screen mentioned left is displayed if [Delete] button is touched.
Confirm the deletion targeted file is specified correctly.
If touch [OK] button, the file is deleted.
If touch [Cancel] button, the deletion is canceled.

3 When the deletion completes, the dialog box shown left is displayed.
If touch [OK] button, the dialog is closed.

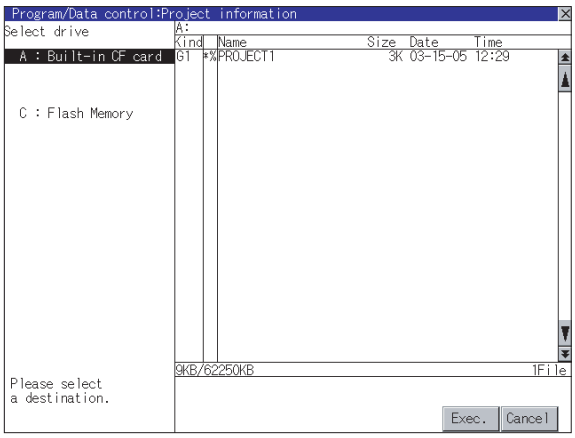
3 Copy operation

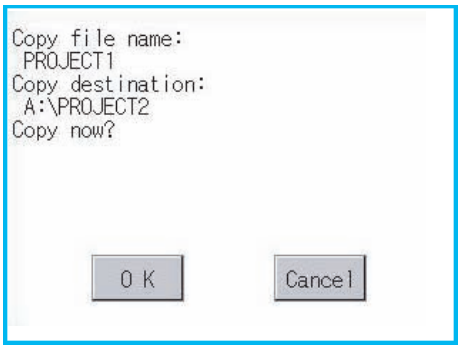
Using the A drive and B drive, the following operations are possible.

- Copying to another directory in the same drive
- Copying between A drive and B drive

Copy to/from C drive is disabled.

(This item explains using the A drive.)





1 Install CF card in the PC, in which create a folder for the copy destination.
Set the same character with [System Setting] of [System Environment] of GT Designer2 for the folder name.

☞ GT Designer2 Version□ Screen Design Manual (3.1 GOT/Controller Type Setting)

2 Install the CF card mentioned above to GOT.
Refer to the following for inserting/removing method of CF card.

☞ 8.4 Video/RGB Unit

3 Open [Project Information] screen to select the file to copy.

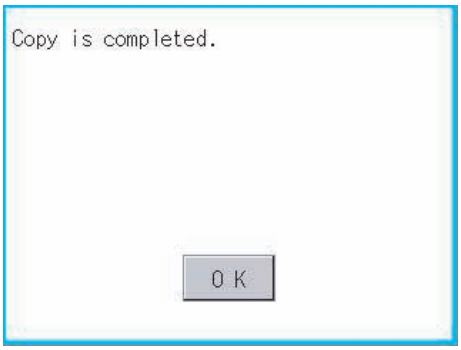
4 If touch [Copy] button, the message [Please select a destination.] is displayed in the left bottom of the screen.

5 If the copy destination folder is touched, the screen display is changed to the folder of copy destination.
At this time, it cannot be copied into the same folder where the file exists.
Select other folders.

6 If touch [Next] button, the dialog mentioned left is displayed.



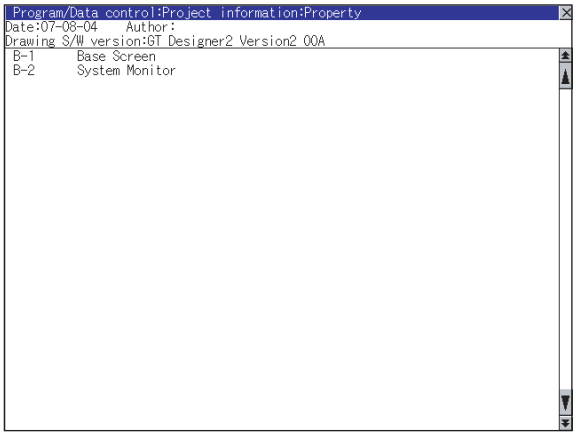
7 Touch [OK] button.
If there is no file of the same name in the copy destination folder, starts to copy.
When there is a file of the same name in the copy destination folder, the dialog mentioned left is displayed without starting the copy.
If copy, in this case, the copied file is overwritten to the project data in the copy destination folder.
If touch [OK] button, starts to copy.
If touch [Cancel] button, cancels to copy.



8 When copying completes, the dialog of completion is displayed.
If touch [OK] button, closes the dialog.

4 Property display operation

Displays the property of the project data in the selected folder.



1 If touch [Property] button after selecting the project data to display the property, the property is displayed as shown left.
In property display, the following information is displayed.

Item	Description
Date	Displays the creation date of the file.
Author	Displays the author of the project data.
Drawing S/W version	Displays name and version of the drawing software by which the project data is created.

2 If touch [▲] [▼] button, the screen scrolls up/down line by one line.

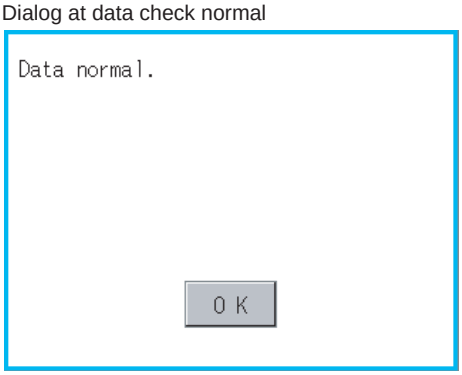
3 If touch [▲▲] [▼▼] button, the screen scrolls up/down by one screen.

4 If touch [⊠] button, the property display is closed and returned to the previous screen.

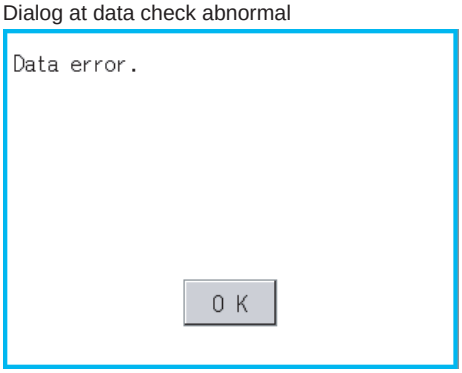
5 Data check operation

Carrys out data check of the selected project file.

Dialog at data check normal



Dialog at data check abnormal



1. Touch the [Data check] button after selecting the file for data check.
   The data check is executed and the result is displayed by the dialog shown left.
2. If touch [OK] button, the dialog is closed.

6 Download operation/setup operation

(1) Download operation

Transfers the project data stored in the A drive (Standard CF Card) or B drive (Extended memory card) to the C drive (Built in flash memory). (The GOT monitors using the data in the C drive.) (This item explains using the A drive.)

Point

Before download operation

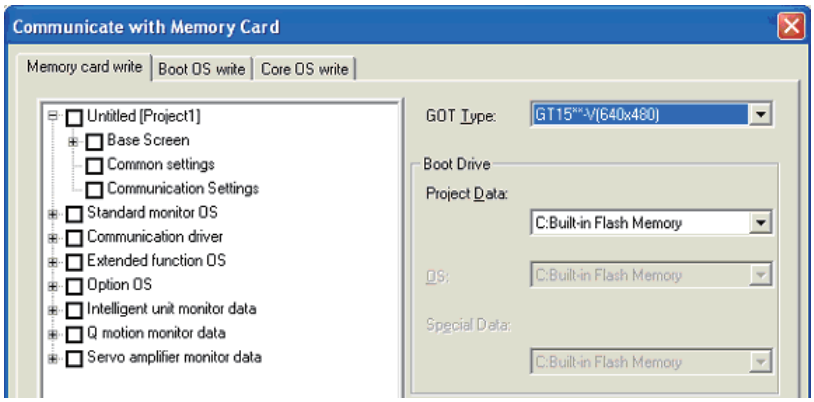
(1) Setup cancel

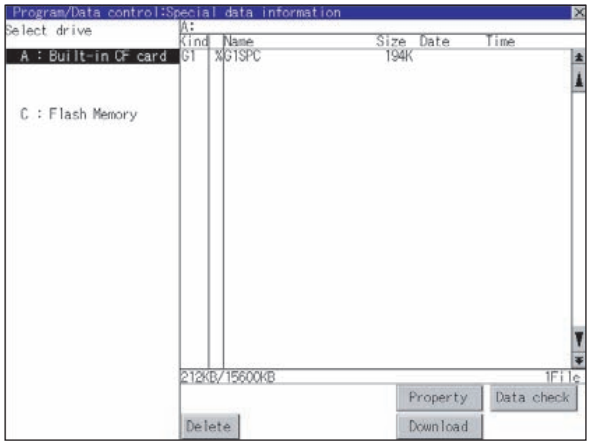
When the project data in the A drive or B drive is set up, the project data cannot be downloaded to the C drive.

Execute setup cancel (☞ 7 (2) Setup cancel) before downloading the project data.

(2) Project data to be stored in a CF card

When storing the project data from GT Designer2 to CF card, select [C: Built-in flash memory] for [Project Data] in the [Boot Drive].





(Continued to next page)

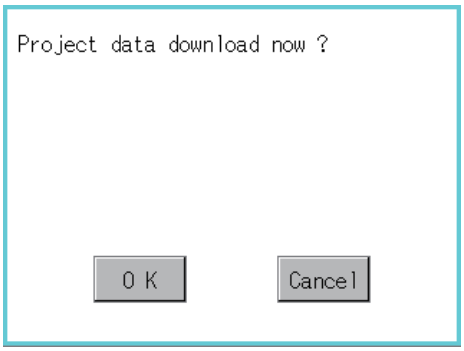
1 Install a CF card in the GOT

Refer to the following for inserting/removing method of CF card.

☞ 8.4 Video/RGB Unit

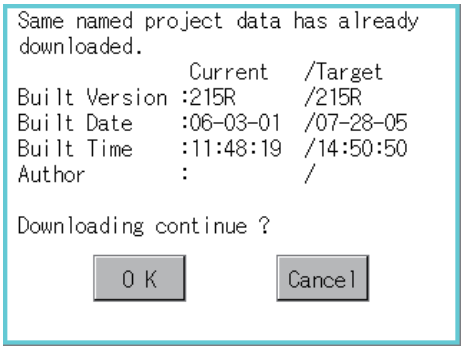
2 Touch [A: Standard CF Card] in Select drive

.



3 If touch the [Download] button, the dialog mentioned left is displayed.

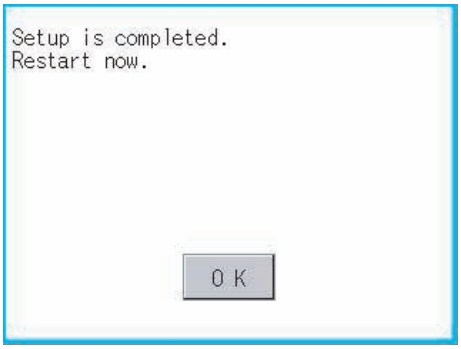
Touching the [OK] button executes downloading.



4 If any project data with the same name exists in the C drive, the screen shown left is displayed without starting downloading.

In this case, the project data of the C drive is overwritten with the project data of the A drive when downloaded.

Touching the [Cancel] button cancels the downloading.



5 When the downloading is completed, the dialog mentioned left is displayed.

Touching the [OK] button restarts the GOT.

(2) Setup operation

Sets the project data stored in the A drive (Standard CF Card) or B drive (Extended memory card) to be used in the GOT.

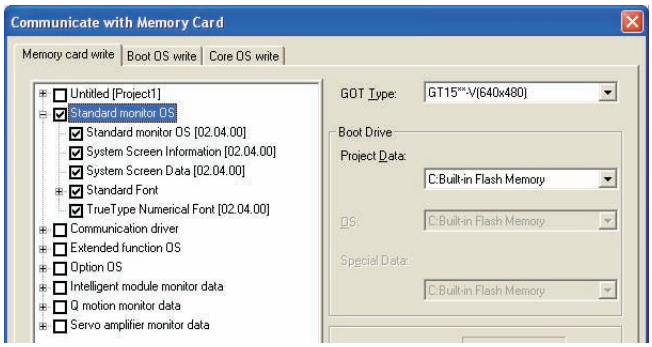
The GOT monitors using the data in the A drive or B drive.

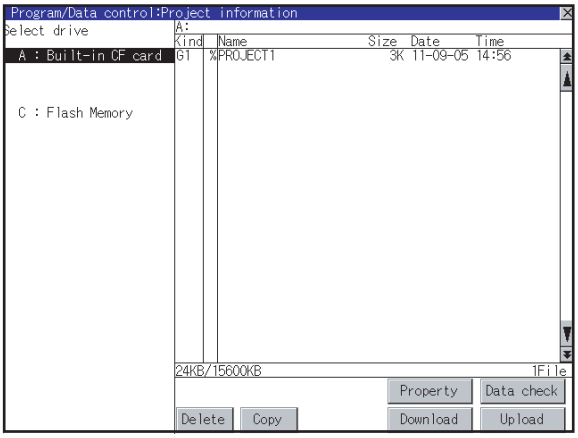
(This item explains using the A drive.)

Point

Before setup operation

When storing project data from GT Designer2 to CF card, select [A: Standard CF Card] for [Project Data] in [Boot Drive].



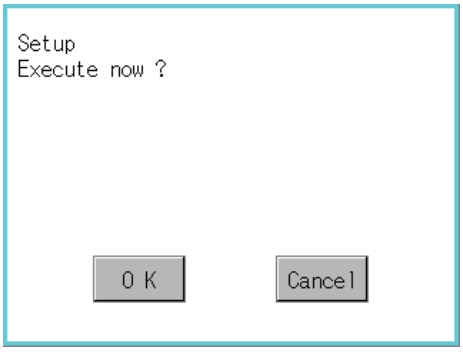


1 Install a CF card in the GOT.

For how to install a CF card, refer to the following.

8.8 CF Card

2 Touch [A: Standard CF Card] in Select drive.



3 If touch the Download button, the dialog mentioned left is displayed.

If touch OK button, the setup is executed.



4 When the setup is completed, the dialog mentioned left is displayed.

Touching the OK button restarts the GOT.

7 Upload/setup cancel operation

(1) Upload operation

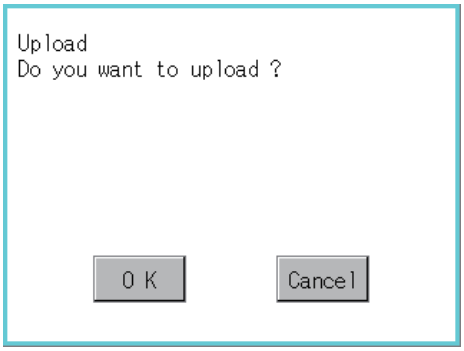
By upload operation, the project data is transferred from the C drive (Built in flash memory) to the A drive (Standard CF Card) or B drive (Extended memory card).
The CF card after uploading can be used for downloading project data to another GOT.
(This item explains using the A drive.)

Point

Before setup operation

The project data cannot be uploaded to the A drive or B drive when the project data of the A drive or B drive is set up.

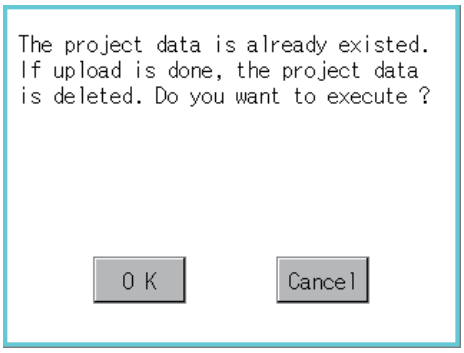
Execute setup cancel (☞ 7 (2) Setup cancel operation) before uploading the project data.



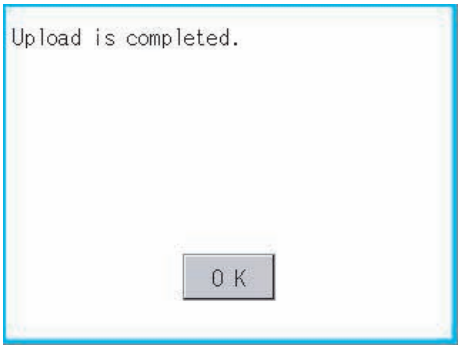
1 Touch [A: Standard CF Card] in Select drive.

2 If touch the Upload button, the screen mentioned left is displayed.

3 Touching the OK button executes uploading.

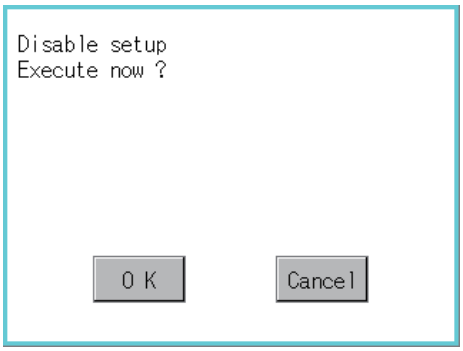


4 If any project data with the same name exists in the A drive, the screen shown left is displayed without starting uploading.
In this case, touching the OK button overwrites the project data of the A drive with the project data with the same name of the A drive.
Touching the Cancel button cancels uploading.



5 When the uploading is completed, the dialog mentioned left is displayed.
Touching the OK button restarts the GOT.

(2) Setup cancel operation
By setup cancel, setup is canceled.
(This item explains using the A drive.)





1 Touch [A: Standard CF Card] in Select drive.

2 If touch the Upload button, the screen mentioned left is displayed.

3 If touch the OK button, setup cancel is executed.

4 When the setup cancel is completed, the dialog mentioned left is displayed.
Touching the OK button restarts the GOT.
After restart, the GOT monitors with the project data in the C drive.

13.4 Alarm Information

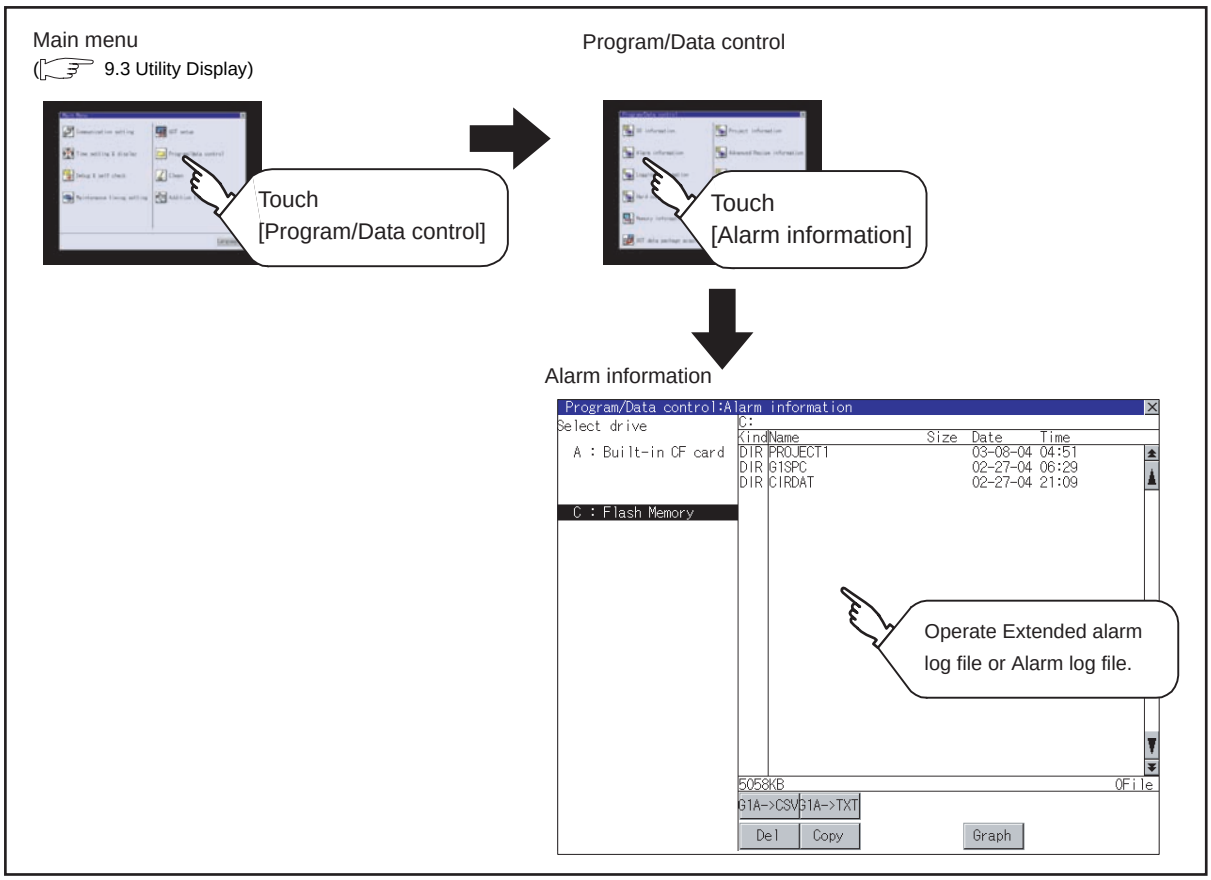
13.4.1 Function of alarm information

The extended alarm log file or alarm log file held by each drive (A: Built-in CF card, B: Extended memory card, C: Flash Memory) is displayed.
The functions below can be carried out for files.
For details of Advanced Alarm, refer to the following manual.

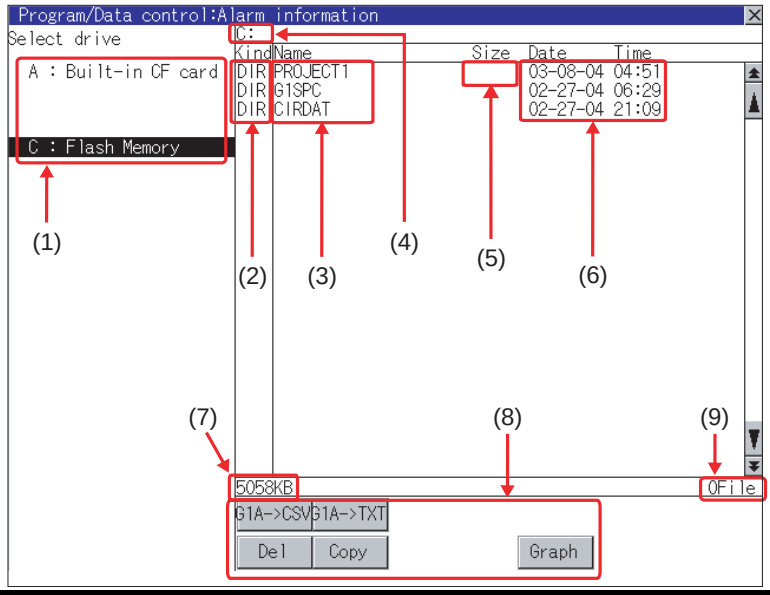
☞ GT Designer2 Version☐ Screen Design Manual (8 ALARM)

Function	Description	Reference page
Information display of files and folders	Displays name, data size, creation date and time of file or folder.	13-29, 13-30
G1A → CSV conversion	Converts the G1A file of advanced alarm log file to CSV file.	13-31
G1A → TXT conversion	Converts the G1A file of advanced alarm log file to TXT file.	13-31
Deletion	Deletes file.	13-39
Copy	Copys file.	13-20
Graph	Displays the advanced alarm watch result by historical graph or tally graph.	13-34

13.4.2 The display operation of alarm information



13.4.3 The display example of alarm information



Number	Item	Description
(1)	Select drive	The drive which displays file or folder can be selected. When CF card is not installed, [A: Built-in CF card] and [B: Memory card] are not displayed.
(2)	Kind	Indicates whether the displayed name is file or folder. In case of file, displays the extension; in case of folder, displays "DIR".
(3)	Name	Displays the file name or folder name. For the long file/folder name, entire part may not be displayed. Confirm the nondisplayed part with the Copy button, etc. (☞ 13.4.4 4 Copy operation) After confirmation, touch the Cancel button to cancel the operation.
(4)	Path name	Displays the path name of drive/folder which is currently displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Date and time	The date and time when each file was created are displayed.
(7)	The size of drive	Displays the size in use and the entire size of the drive which is selected by drive selection. (Only the size in use is displayed when selecting the C drive.)
(8)	Operation switch	Execution switch of each function.
(9)	Number of folders and files	Displays the total number of the displayed files and folders.

Point Display of creation date and time

The creation date and time display is not updated even if a file is created or updated while displaying the alarm information display screen.
If close the screen currently displayed (moving the screen to the folder of the upper hierarchy, etc.) and display the screen again, the updated contents are displayed.

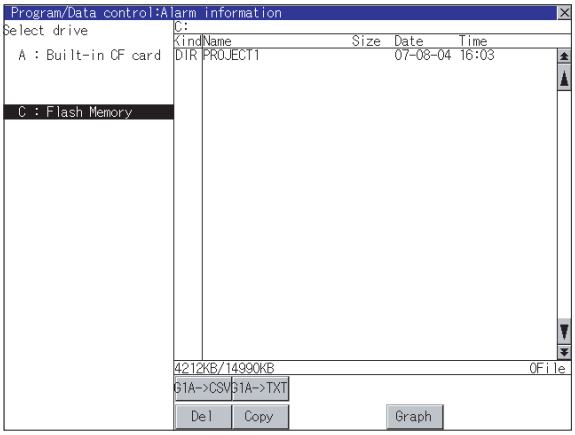
Remark Folders and files displayed

For the folders and files displayed, refer to the following.

☞ 13.1.5 Display file

13.4.4 Alarm information operation

1 The display operation of alarm information



1. If touch a drive of select drive, the information of the touched drive is displayed.
2. If touch a folder name, the information of the touched folder is displayed.
3. If touch a folder of ". .", the information of the folder of the one upper hierarchy is displayed.
4. If touch ▲ ▼ button of the scrollbar, the screen scrolls up/down by one line.
   If touch ⏫ ⏬ button, the screen scrolls up/down by one screen.
5. If touch a file name, the file is selected.
6. Refer to the following for G1A → CSV, G1A → TXT, delete, copy, graph operations.
   G1A → CSV ,
   G1A → TXT ..... ☞ this section 2
   Delete ..... ☞ this section 3
   Copy ..... ☞ this section 4
   Graph ..... ☞ this section 5
7. If touch ☒ button, the screen is closed.

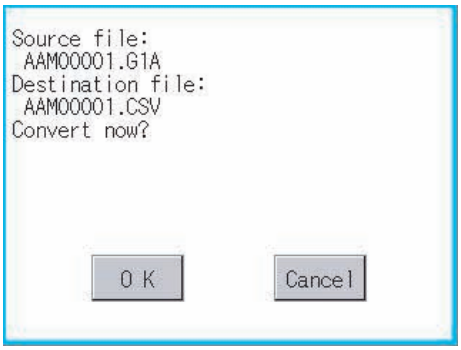
2 G1A → CSV conversion operation, G1A → TXT conversion operation

The selected G1A file is converted to CSV file or TXT file.

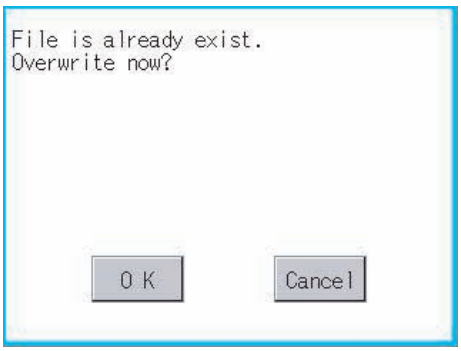
1 Touch and select the G1A file which is to be converted to CSV file or TXT file.

2 The following dialogue is displayed when touching the following button according to the file type to convert to.

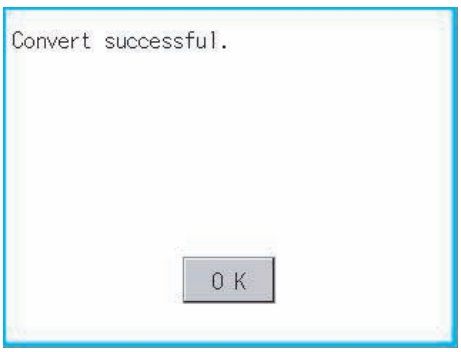
- CVS file: [G1A->CSV] Button
- TXT file: [TXT->CSV] Button



(Example: Dialogue when [G1A->CSV] button is touched)



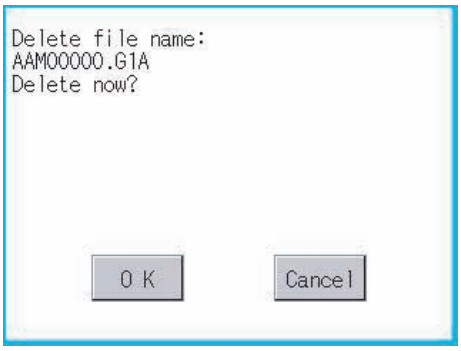
3 Touch [OK] button.
When the file, whose name is the same, exists in the destination folder, the dialog showed at left appears without starting the conversion.
If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels the conversion.

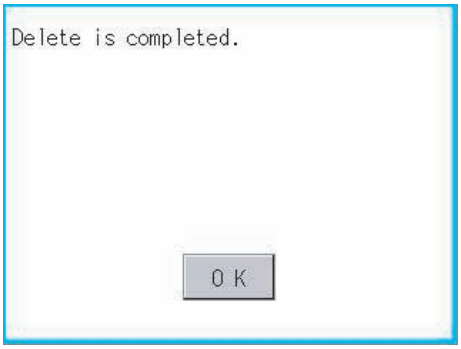


4 The message of completion is displayed in dialogue when conversion is completed.
If touch [OK] button, the dialog is closed.

3 Deletion operation

Deletes selected files.

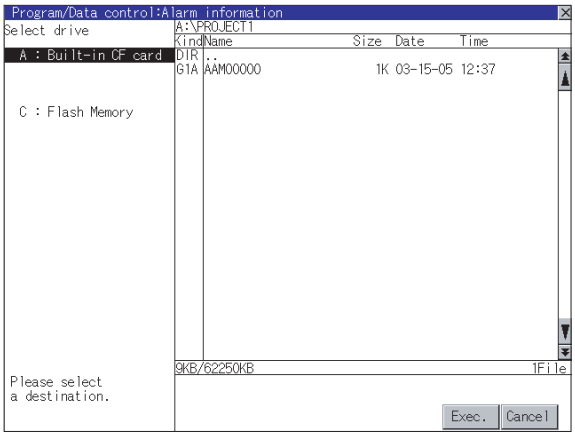


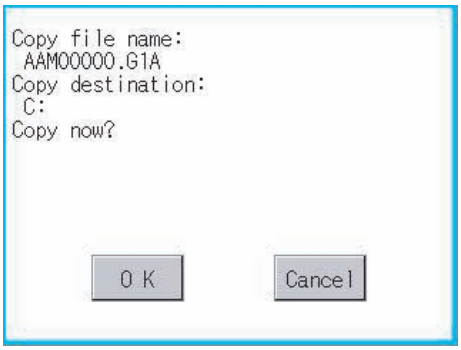


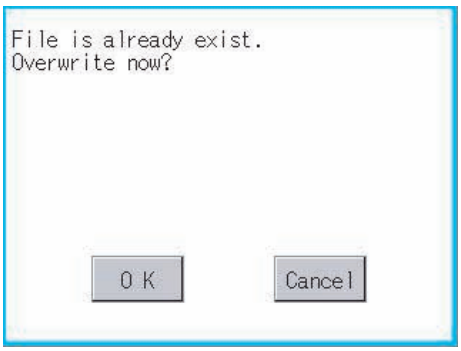
1. Touch and select the file to delete.
2. If touch [Del] button, the dialog mentioned left is displayed.
   If touch [OK] button, the file is deleted.
   If touch [Cancel] button, the deletion is canceled.
3. When the deletion is completed, the completion dialog is displayed.
   If touch [OK] button, the dialog is closed.

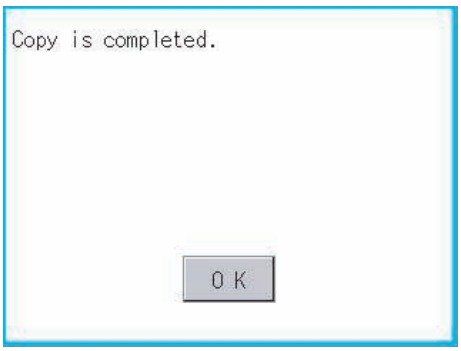
4 Copy operation

Copies the selected file.









1 Touch and select the file to copy.

2 If touch [Copy] button, the message [Please select a destination.] is displayed in the left bottom of the screen.

3 If the copy destination folder is touched, the screen display is changed to the folder of copy destination.
At this time, it cannot be copied into the same folder where the file exists.
Select other folders.

4 If touch [Next] button, the following dialog shown left is displayed.

5 Touch [OK] button.
If there is a file of the same name in the copy destination folder, the following dialog is displayed without starting the copy.
If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels to copy.

6 When the copy is completed, the dialog of completion is displayed.
If touch [OK] button, closes the dialog.

5 Graph operation

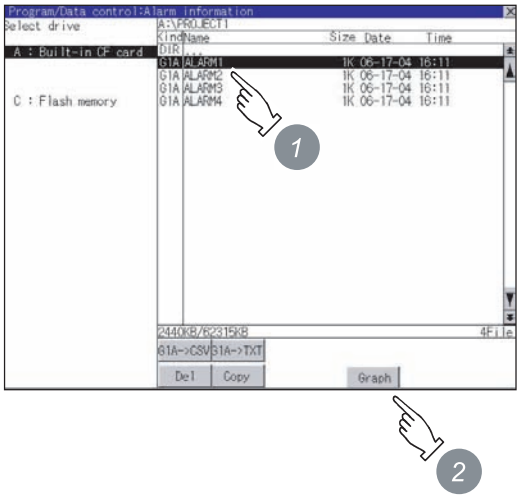
Displays the selected extended alarm log file in a graph.

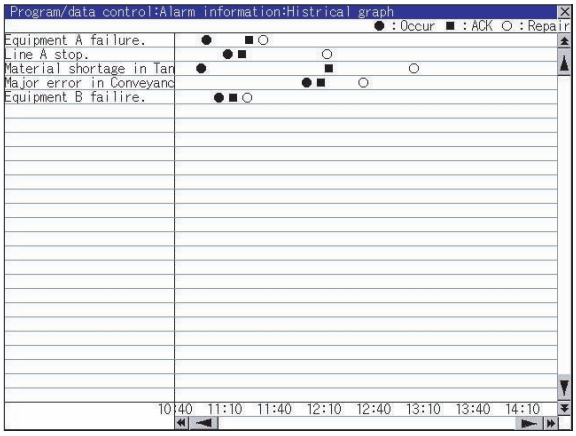
When the extended alarm watch (advanced user alarm, advanced system alarm) is set in history mode, the selected extended alarm log file is displayed in historical graph (☞ (1) Historical graph display).

When set in accumulation mode, displayed it in tally graph (☞ (2) Tally graph display).

Refer to the following for details related to setting of the extended alarm watch.

☞ GT Designer2 Version☐ Screen Design Manual (8 ALARM)





(Example: Historical graph)

1 Touch and select the G1A file to display in a graph.

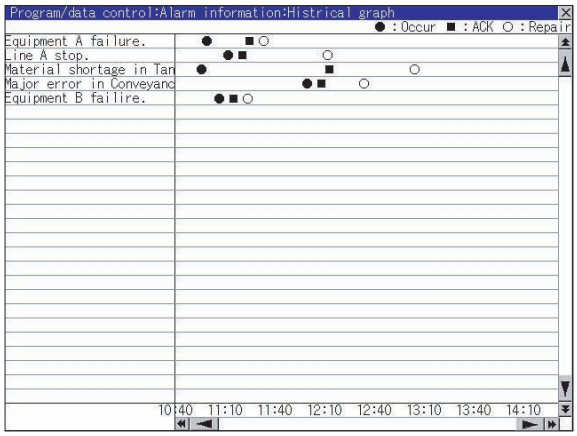
2 If touch [Graph] button, displays the historical graph or tally graph according to the setting of the extended alarm watch.

3 When move a graph, operate as follows.

- If touch [▲] / [▼] button, moves the graph up/down line by line.
- If touch [⏫] / [⏬] button, moves the graph up/down by one screen.
- If touch [◀] / [▶] button, moves the graph to left/right by one column.
- If touch [⏪] / [⏩] button, moves the graph to left/right by one screen.

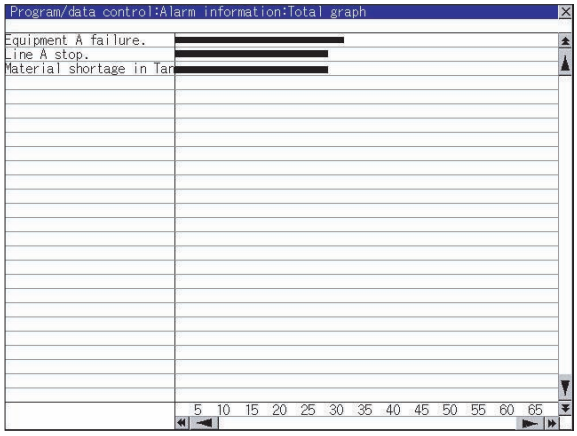
4 If touch [⊠] button, closes the graph.

(1) Historical graph display



- Displays the generated time (●), confirmed time (■) and restored (○) time of each alarm.
- Displays the time scales by 30 minutes interval in the bottom of the graph.
- The alarms generated in the order of registering alarm are displayed.
- By the name of each alarm, the contents set for the message of the general alarms by GT Designer2 are displayed with up to 12 characters of full-size character (up to 24 half-size characters).
  The 13th of full-size character and after (the 25th and after for half-size character) are not displayed.
- The graph displays the alarm within up to 26 lines in one screen.

(2) Tally graph display



- Displays the generated frequency of each alarm by the sideways bar chart.
- By the name of each alarm, the contents set for the message of the general alarms by GT Designer2 are displayed with up to 12 characters of full-size character (up to 24 half-size characters).
  The 13th of full-size character and after (the 25th and after for half-size character) are not displayed.
- The graph displays the alarm within up to 26 lines in one screen.

13.5 Hard Copy Information

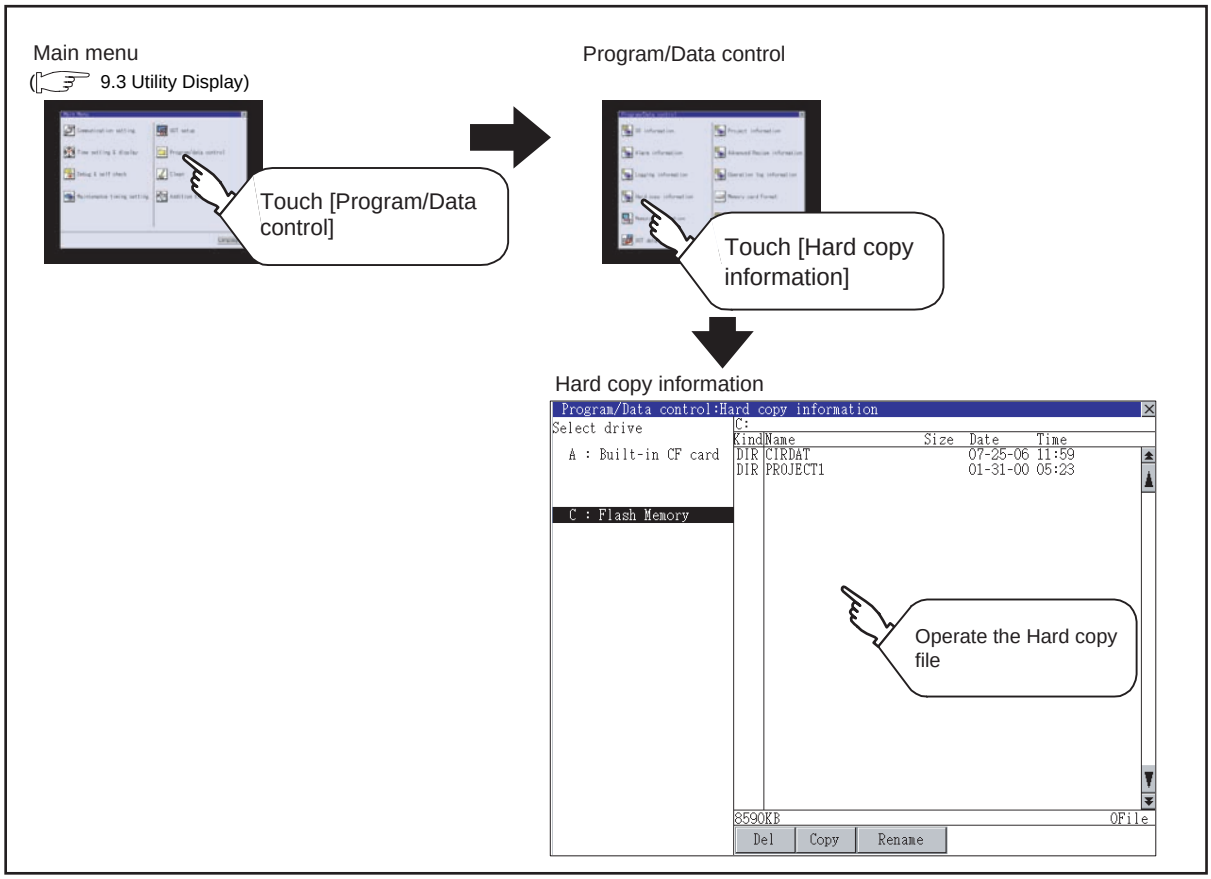
13.5.1 The function of hardcopy information

Carries out delete, copy and move to the file created by the hardcopy function.
Refer to the following manual for details of hard copy function.

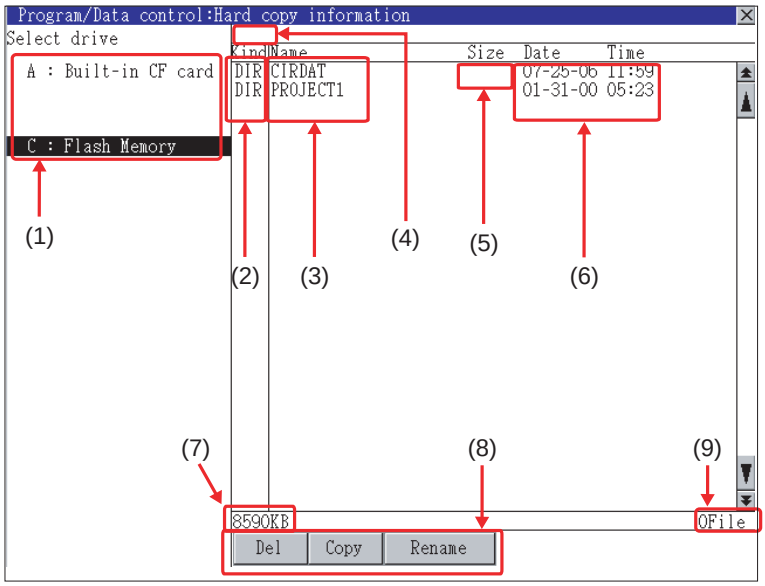
☞ GT Designer2 Version☐ Screen Design Manual (13.2 Hard Copy)

Function	Description	Reference page
Information display of files and folders	Displays the kind, name, data size, creation date and time of the file or folder.	13-37, 13-38
Delete	Deletes the file.	13-39
Copy	Copies the file.	13-40
Rename	Renames the file.	13-41

13.5.2 The display operation of hardcopy information



13.5.3 Display exmaple of hardcopy information



Number	Item	Description
(1)	Select drive	The drive which displays file or folder can be selected. When CF card is not installed, [A: standard CF Card] and [B: Memory card] are not displayed.
(2)	Kind	Indicates whether the displayed name is file or folder. In case of file, displays the extension; in case of folder, displays "DIR".
(3)	Name	Displays the file name or folder name. For the long file/folder name, entire part may not be displayed. Confirm the nondisplayed part with the Copy button, etc. (☞ 13.5.4 3 Copy operation) After confirmation, touch the Cancel button to cancel the operation.
(4)	Path name	Displays the path name of drive/folder which is currently displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Date and time	Displays the creation date and time of each file.
(7)	The size of drive	Displays the size in use and the entire size of the drive which is selected by drive selection. (Only the size in use is displayed when selecting the C drive.)
(8)	Operation switch	Execution switch of each function.
(9)	Number of folders and files	Displays the total number of the files and folders displayed.

Point

Display of the creation date and time

The creation date and time display is not updated even if a file is created or updated while displaying the hardcopy information.
To display the updated creation date and time, close the screen currently displayed (by moving to the upper hierarchy folder, etc.) and display the screen again.

Remark

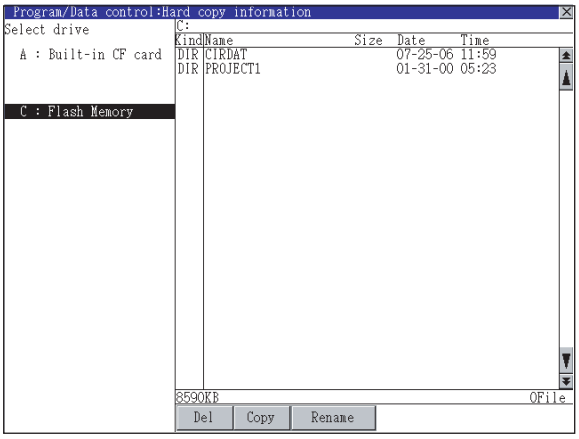
Displayed folders and files

For the folders and files displayed, refer to the following.

☞ 13.1.5 Display file

13.5.4 The operation of hardcopy information

1 Display operation of hardcopy information



1. If touch a drive of select drive, the information of the touched drive is displayed.
2. If touch a folder name, the information in the touched folder is displayed.
3. If touch a name of the folder of ". .", the information in the folder of one higher hierarchy is displayed.
4. If touch ▲ ▼ button of the scrollbar, scrolls up/down line by one line.
   If touch ⏫ ⏬ button, the screen scrolls up/down by one screen.
5. If touch a file name, the file is selected.
6. For the operations of the delete, copy, and rename, refer to the following.

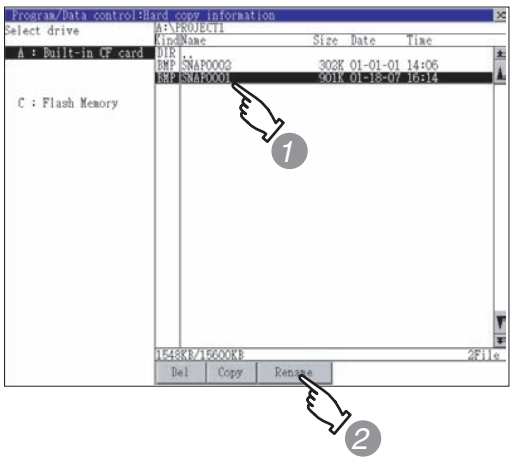
   Delete ..... ☞ this section 2

   Copy ..... ☞ this section 3

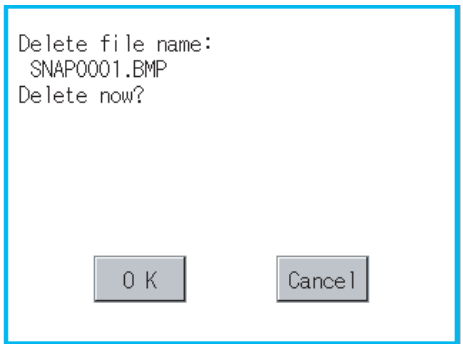
   Rename ..... ☞ this section 4
7. If touch ⊠ button, closes the screen.

2 Delete operation

Deletes the selected file.



1 Touch and select the file to delete.



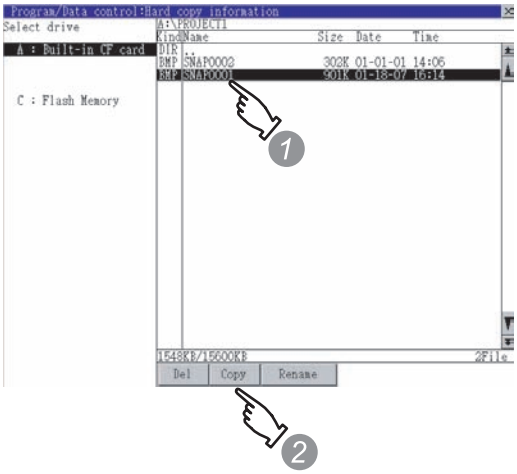
2 If touch Del button, the screen mentioned left is displayed.
If touch OK button, deletes the file.
If touch Cancel button, cancel the deletion.



3 When the deletion is completed, the completion dialog is displayed.
If touch OK button, the dialog is closed.

3 Copy operation

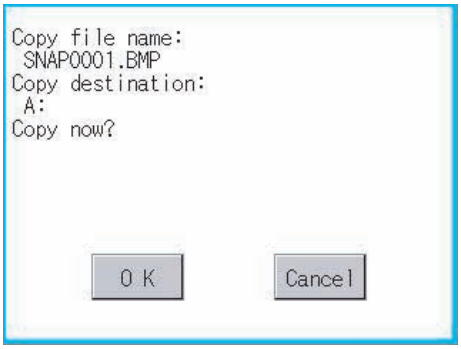
Copies the selected file.



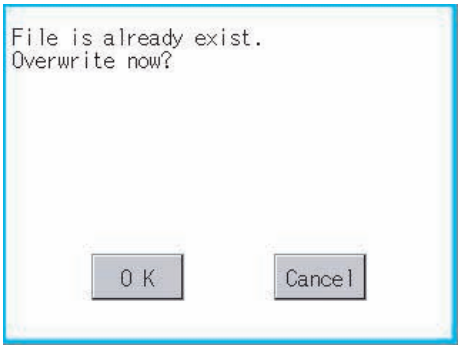
1 Touch and select the file to copy.

2 If touch [Copy] button, the dialog [Please select a destination.] is displayed in the left bottom of the screen.

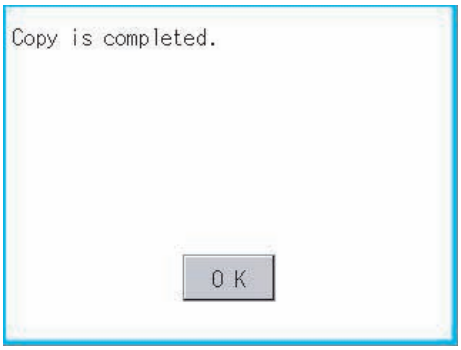
3 If touch the folder of the copy destination, the screen display is changed to the folder of copy destination.
The copied file cannot be copied to its own folder.Select the different folder.



4 If touch [Next] button, the dialog box shown left is displayed.



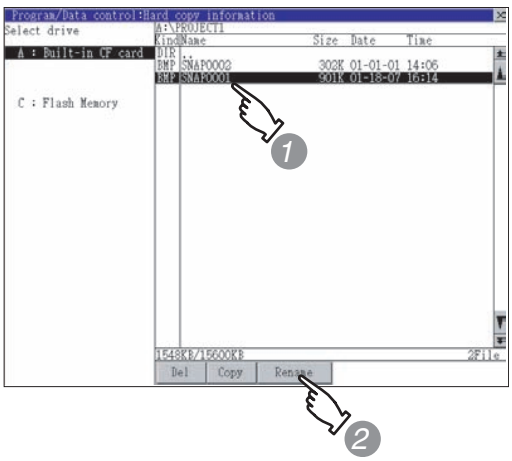
5 Touch [OK] button.
If there is a file of the same name in the copy destination folder, the screen shown left is displayed without starting to copy.
If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels to copy.



6 When the copy is completed, the dialog of completion is displayed.
If touch [OK] button, the dialog is closed.

4 Rename operation

Rename the selected file.



1 Select a file to be renamed with touching the file.

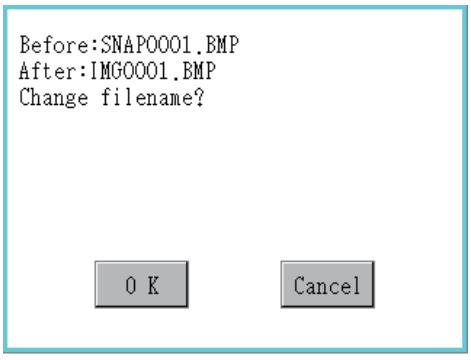


2 Touch the [Rename] button, and then the screen shown left is displayed. Input the file name to be changed.

Character types to be input can be changed with touching the following buttons.

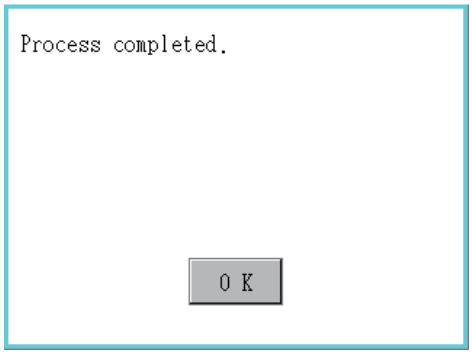
[A-Z] : Alphabet capital

[0-9] : Numeric/Symbol



3 Touch the [Enter] button, and then the dialog box shown left is displayed.

4 Touch the [OK] button, and then renaming the file is started.



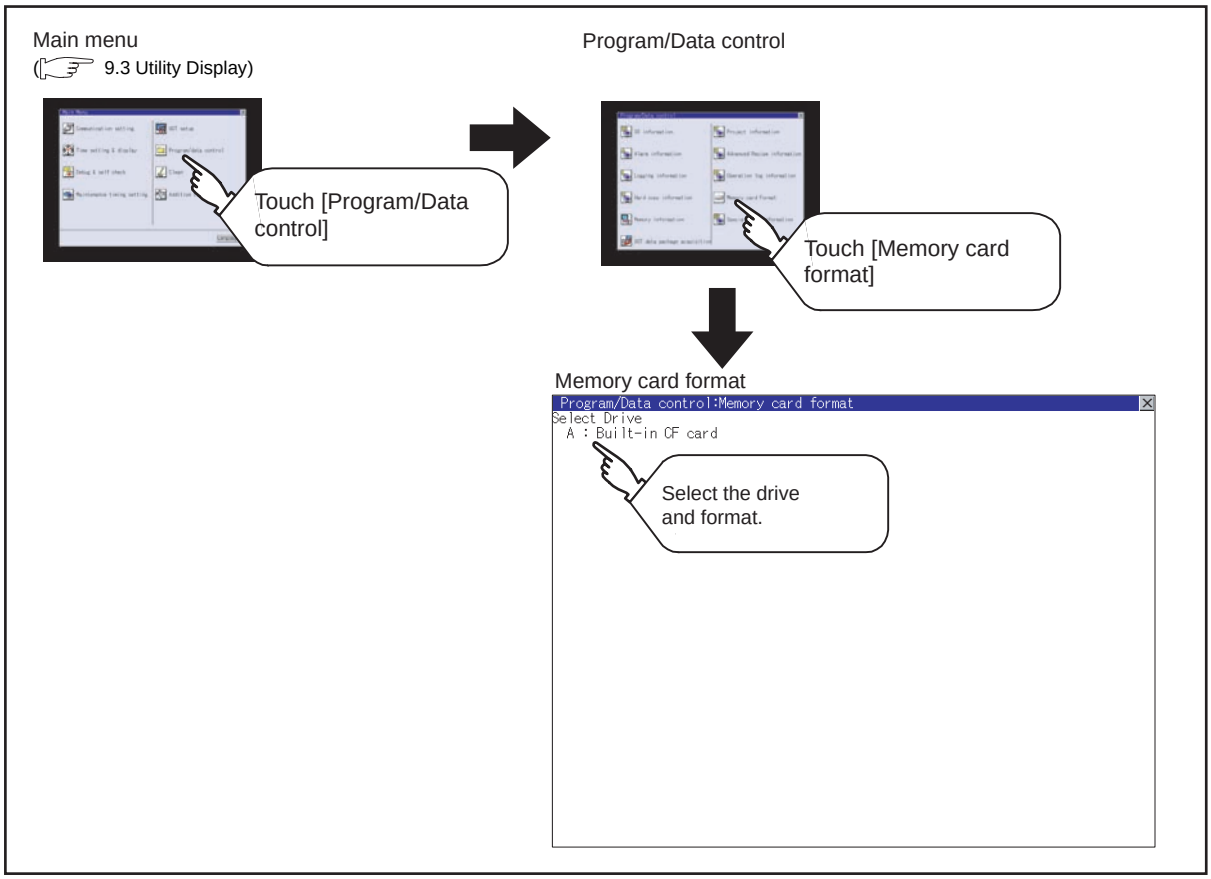
5 When renaming the file is completed, a completion dialog box is displayed. Touch the [OK] button, and then the dialog box is closed.

13.6 Memory Card Format

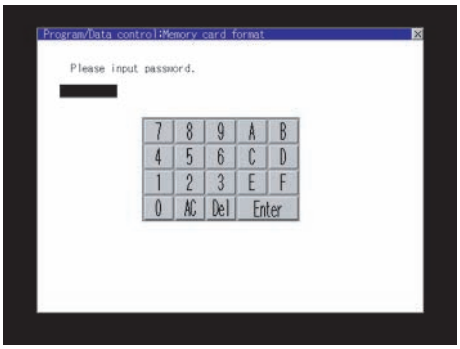
13.6.1 Function of the memory card format

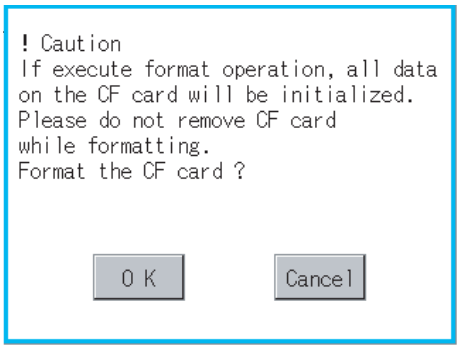
Formats the memory card.

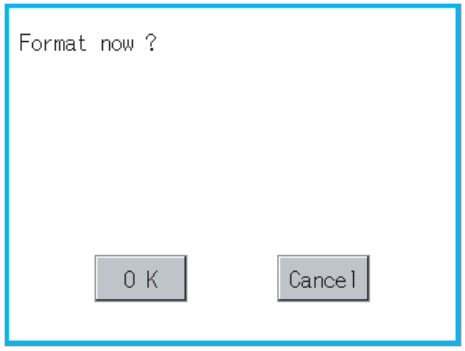
13.6.2 Display operation of memory card format



13.6.3 Operating the memory card format







1 Install the memory card to GOT.
Refer to the following for inserting/removing method of memory card.
☞ 8.8 CF Card

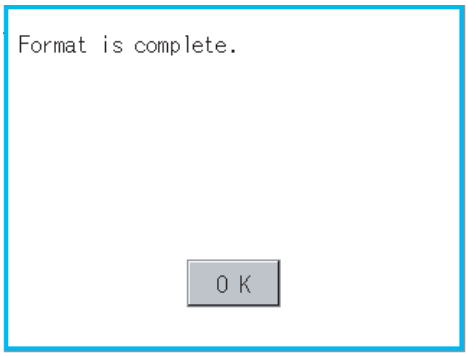
2 Touch and select the drive to format by drive selection.

3 If touch [Format] button, the password input screen is displayed.

4 Type [1] [1] [1] [1] and touch the [Enter] key. The dialog box shown on the left will appear. (The password is fixed to 1111.)
Confirm the contents of the dialog.
When execute the memory card format, touch [OK] button.
When cancel the memory card format, touch [Cancel] button.

5 If touch [OK] button by 4, the dialog mentioned left is displayed for reconfirm.

6 Reconfirm whether to format the memory card.
If touch [OK] button, starts formatting.
If touch [Cancel] button, cancels formatting.



7 When the formatting is completed, the completion dialog mentioned left is displayed.

8 If touch [OK] button, closes the dialog.

Remark Restrictions on formatting

- When use an unformatted memory card in GOT, format the memory card by PC. GOT cannot format the unformatted memory card.
- The formatting of GOT does not change the file system (Example: FAT16) of the memory card and inherits the file system before formatting.

13.7 Advanced Recipe Information

Point

Before using advanced recipe information

For writing/reading into/from a controller with this function or editing of advanced recipe file on the personal computer, refer to the following manual.
Specifications and operating procedure are described.

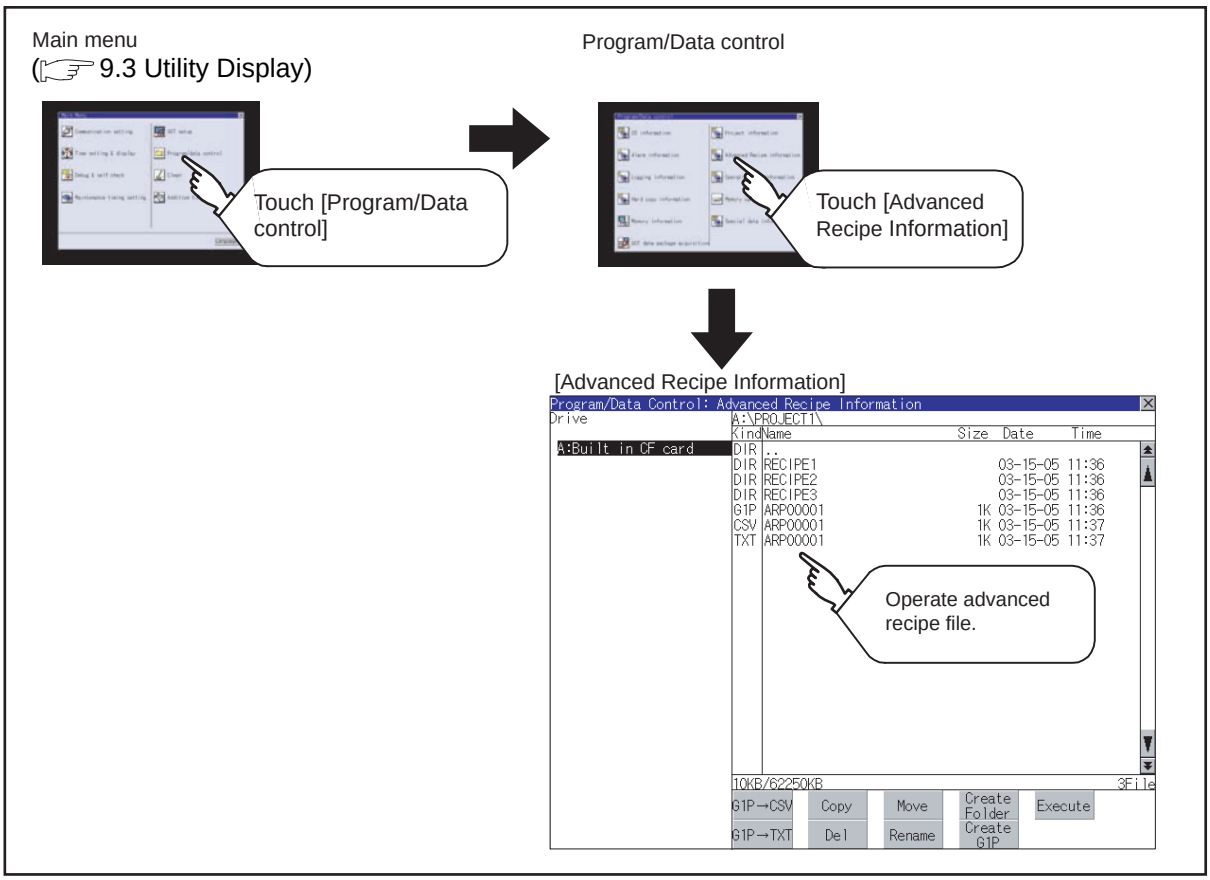
☞ GT Designer2 Version□ Screen Design Manual
(13.1 Advanced Recipe Function)

13.7.1 Function of advanced recipe information

For the advanced recipe file used in advanced recipe function, copy/delete/file output are available.
In addition, it is possible to writing/reading into/from a controller by using this function, without creating the screen to operate the advanced recipe. (Advanced recipe setting of GT Designer2 is required.)

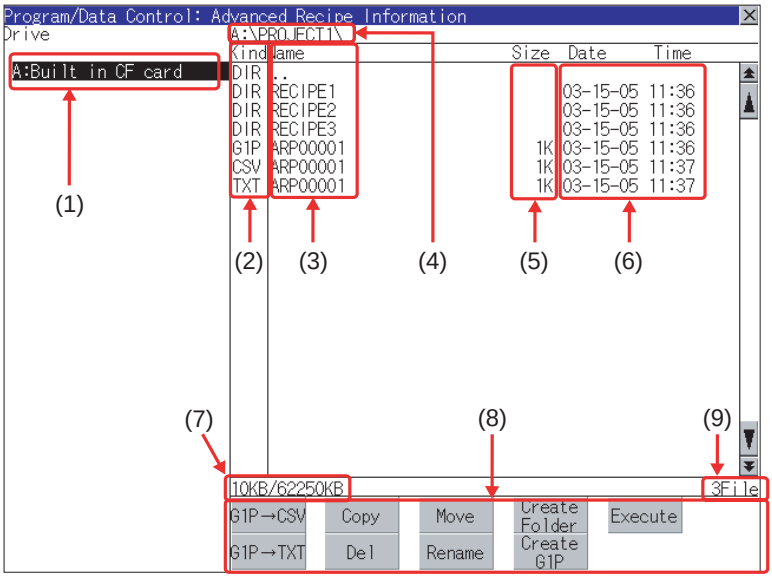
Function		Description	Refer to
Advanced Recipe Information screen	Displaying file, folder data	The file/folder name, data size and creating date & time are displayed.	13-47,13-49
	G1P → CSV conversion	G1P file of advanced recipe file is converted to CSV file.	13-50
	G1P → TXT conversion	G1P file of advanced recipe file is converted to Unicode text file.	13-50
	Del	File or folder is deleted.	13-52
	Copy	File is copied.	13-53
	Move	File is moved.	13-54
	Rename	File name is changed.	13-56
	Create Folder	New folder is created.	13-57
	Create G1P	New G1P file of advanced recipe file is created.	13-58
Advanced Recipe Record List screen	Load record GOT → PLC	Selected record value is loaded in the device of controller.	13-60
	Save record PLC → GOT	The device of controller is saved in selected record.	13-61
	Match records GOT → PLC	Selected record is verified to the device value of controller.	13-63
	Delete Device Value	The device value contained in selected record is deleted.	13-65

13.7.2 Operation of advanced recipe information display



13.7.3 Example of advanced recipe information display

1 Advanced recipe information screen



Number	Item	Description
(1)	Drive	The target drive can be selected. (Even if CF card is not installed, this message appears.)
(2)	Kind	Indicates whether the displayed name is file or folder. In case of file, displays the extension; in case of folder, displays "DIR".
(3)	Name	Displays the file name or folder name. For the long file/folder name, entire part may not be displayed. Confirm the nondisplayed part with the [Rename] button, etc. (☞ 13.7.4 *6* Rename operation) After confirmation, touch the [Cancel] button to cancel the operation.
(4)	Path name	Displays the path name of drive/folder which is currently displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Creating date & time	The date and time when each file was created are displayed.
(7)	Drive size	Displays the used/entire size of drive selected by select drive.
(8)	Operation switch	Execution switch of each function.
(9)	Number of folders and files	Displays the total number of the displayed files and folders.

Point

About the displayed file

The files other than that for advanced recipe are not displayed on the advanced recipe information screen.

Remark

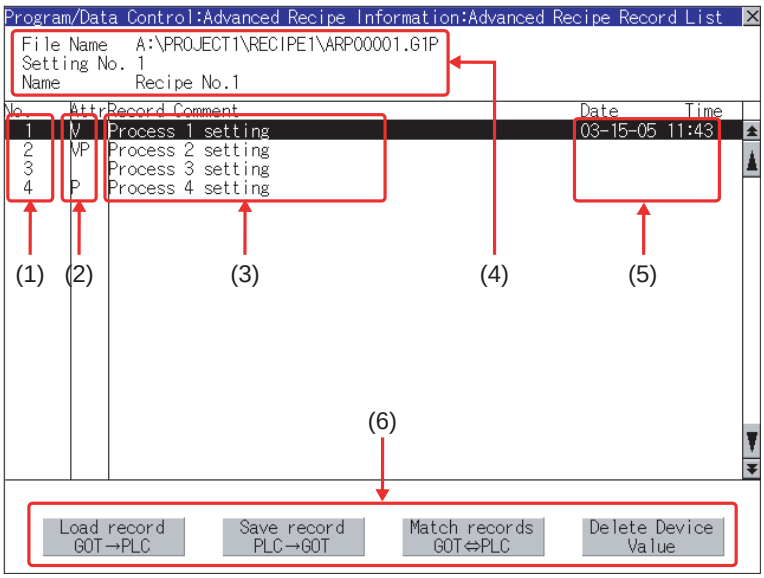
Folders and files displayed

For the folders and files displayed, refer to the following.

☞ 13.1.5 Display file

2 Advanced recipe record list screen

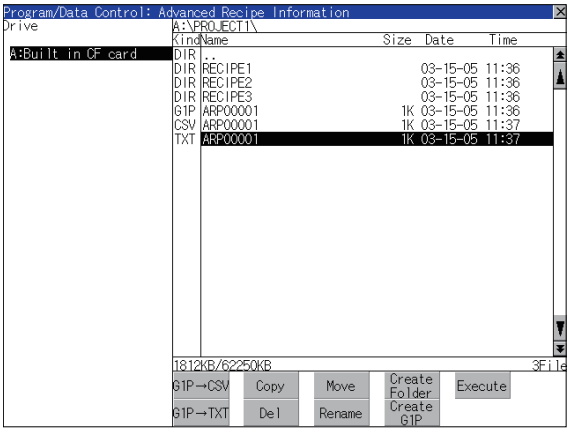
1 Touching the Excute button on the advanced recipe information screen after selecting the advanced recipe file, this screen appears.
Records selected in each advanced recipe file can be displayed or saved/loaded.



Number	Item	Description
(1)	No.	Record No. of advanced recipe file is displayed.
(2)	Attr	Attribution of record is displayed. Attribution of record can be changed with GT Designer2. V : Record can be loaded/saved (Record whose value is selected.) VP : Record only for loading (Record whose value is selected and cannot be changed.) Blanc : Record only for saving (Record whose value is deleted or not selected.) P : Record unusable (reserved area) (Record whose value is not selected and cannot be changed.)
(3)	Record Comment	Record Comment is displayed.
(4)	File Name	Path and name of recipe file are displayed.
	Setting No.	Recipe No. is displayed.
	Name	Recipe name is displayed.
(5)	Date and time	Date and time when record comment is updated are displayed.
(6)	Operating switch	Execution switch of each function.

13.7.4 Advanced recipe information operation

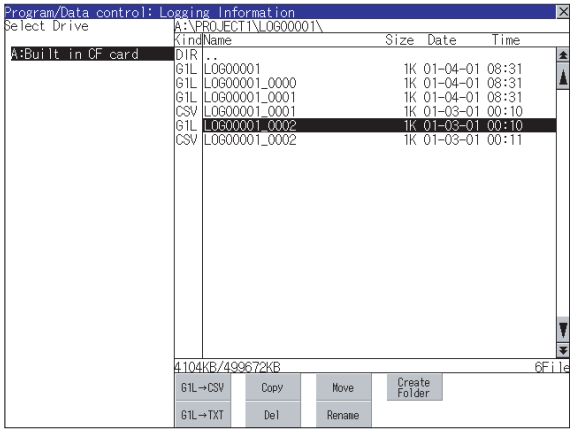
1 Display operation of advanced recipe information

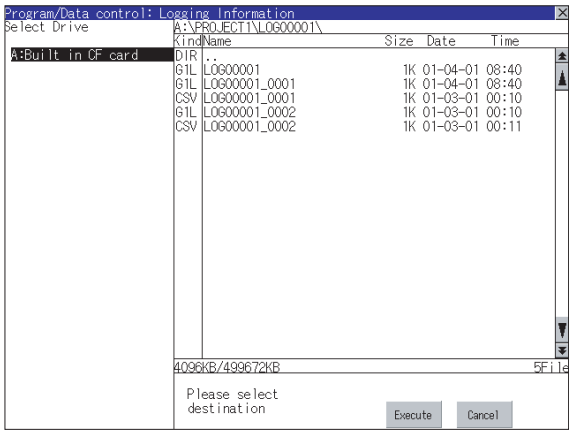


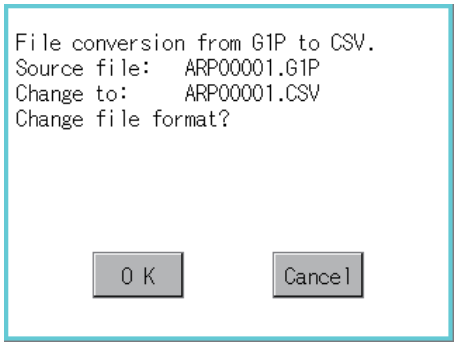
1. If touch a drive of select drive, the information of the touched drive is displayed.
2. If touch a folder name, the information of the touched folder is displayed.
3. If touch a folder of ". .", the information of the folder of the one upper hierarchy is displayed.
4. If touch ▲ ▼ button of the scrollbar, the screen scrolls up/down by one line.
   If touch ⏫ ⏬ button, the screen scrolls up/down by one screen.
5. If touch a file name, the file is selected.
6. For operation of operating switches, refer to the following.
   G1A → CSV,
   G1A → TXT ..... ☞ this section 2
   Delete ..... ☞ this section 3
   Copy ..... ☞ this section 4
   Move ..... ☞ this section 5
   Rename ..... ☞ this section 6
   Create Folder ..... ☞ this section 7
   Create G1P ..... ☞ this section 8
   Execute..... ☞ this section 9 to 12
7. If touch ☒ button, the screen is closed.

2 G1P → CSV conversion operation, G1P → TXT conversion operation

Advanced recipe file (G1P file) is converted to CSV file or Unicode text file that can be displayed/edited on personal computer.







(Example: Dialog if the G1P->CSV button is touched.)

(Continued to next page)

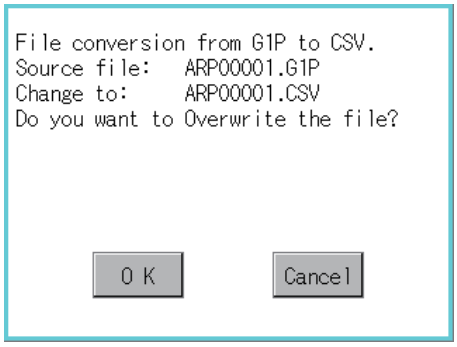
1 Touch and select the G1P file which is to be converted to CSV file or Unidcode text file.

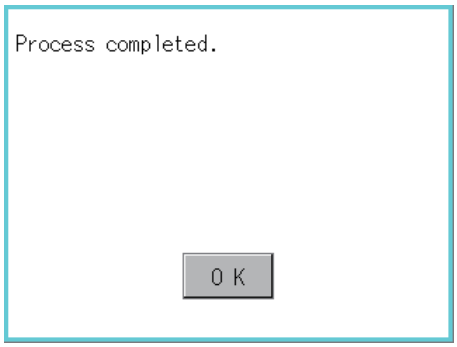
2 Touch the following button in accordance with destination file type.

- CSV file : G1P->CSV button
- Unicode text file : G1P->TXT button

3 Select the target folder.
(Selecting a folder is not needed for outputting directly below the drive.)

4 If touch the Excute button, the dialog shown left is displayed.
Touch the OK button.
(While executing, "Processing..." message appears on the screen.)



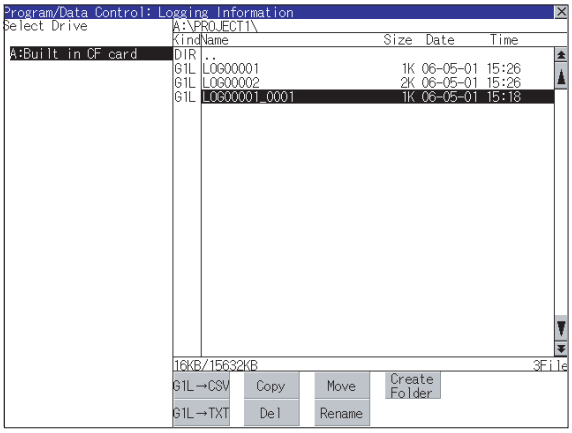


5 When the file, whose name is the same, exists in the destination folder, the dialog shown left appears without starting the conversion. If touch the OK button, overwrites the file.
If touch Cancel button, cancels the conversion.

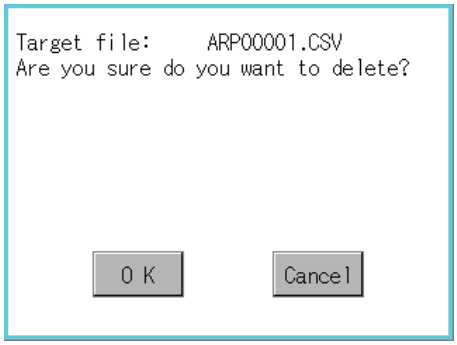
6 The message of completion is displayed in dialogue when conversion is completed.
If touch OK button, the dialog is closed.

3 Delete operation

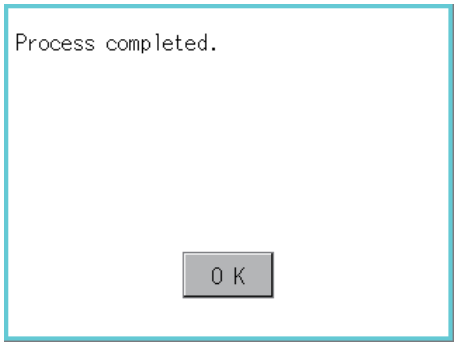
Folder and file to be used on advanced recipe are deleted.



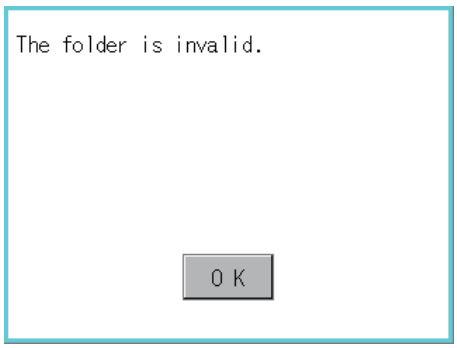
1 Touch and select the file/folder to delete.



2 If touch [Del] button, the dialog mentioned left is displayed.
If touch [OK] button, the file/folder is deleted.
(While executing, "Processing..." message appears on the screen.)
If touch [Cancel] button, the deletion is canceled.



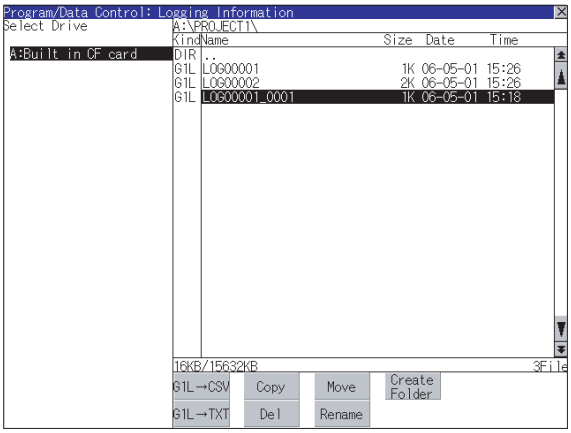
3 When the deletion is completed, the completion dialog is displayed.
If touch [OK] button, the dialog is closed.



4 When it cannot be deleted, the dialog showed at left appears. (Only when deleting folder is executed.)
Verify that there is no file in the folder and execute the delete operation again.
(☞ 13.8.5 Precautions)

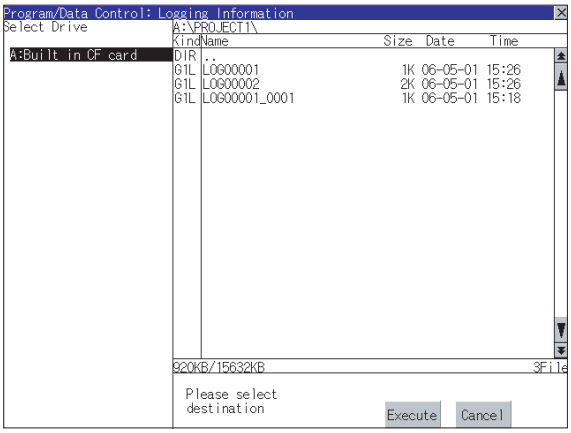
4 Copy operation

Folder to be used in advanced recipe is copied.



1 Touch and select the file to copy.

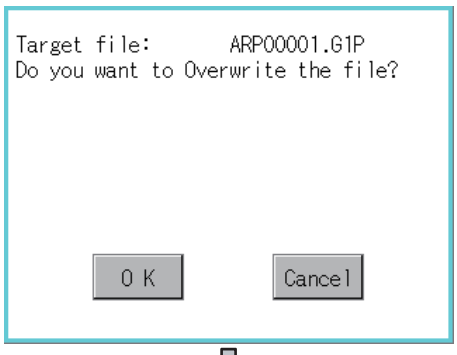
2 Touch the [Copy] button.



3 Select the target folder.
(Selecting a folder is not needed for outputting directly below the drive.)
At this time, it cannot be copied into the same folder where the file exists.
Select other folders.

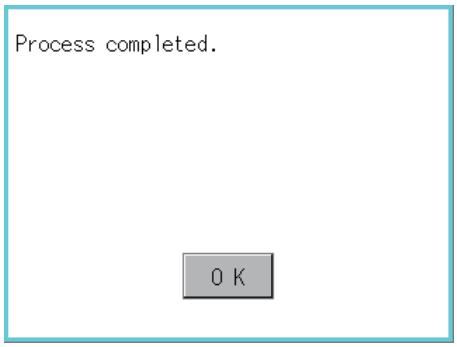


4 If touch [Excute] button, the following dialog shown left is displayed.
Touch [OK] button.
(While executing, "Processing..." message appears on the screen.)



5 If there is a file of the same name in the copy destination folder, the following dialog is displayed without starting the copy.
If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels to copy.

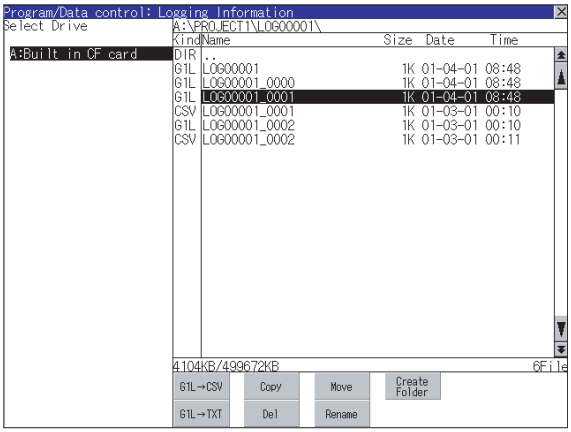
(Continued to next page)



6 When the copy is completed, the dialog of completion is displayed.
If touch [OK] button, closes the dialog.

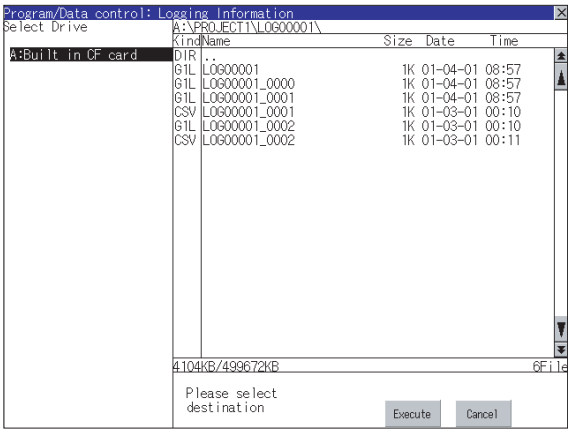
5 Move operation

Files to be used in advanced recipe are moved.



1 Select the file to be moved by touching it.

2 Touch the [Move] button.

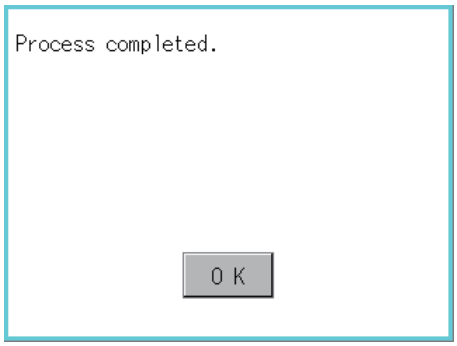


3 Select the target folder.
(Selecting a folder is not needed for moving directly below the drive.)

(Continued to next page)







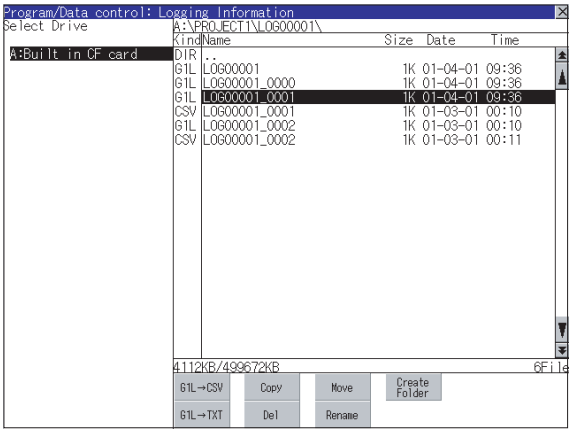
4 If touch the [Execute] button, the dialog shown left is displayed.
Touch the [OK] button.
(While executing, "Processing..." message appears on the screen.)

5 When any file with the same name exists in the destination folder, the dialog shown left appears without starting the movement.
Touching the [OK] button overwrites the file.
If touch the [Cancel] button, cancels moving.

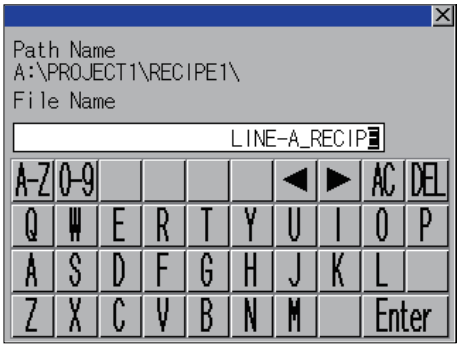
6 When moving is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

6 Rename operation

File name to be used in advanced recipe is changed.



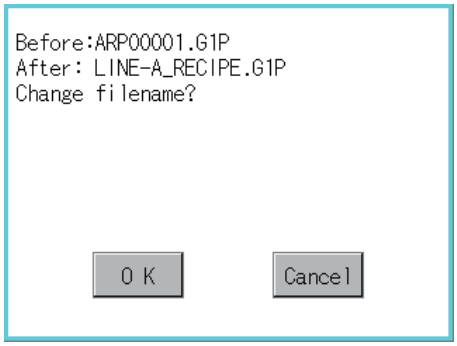
1 Select the file to be renamed by touching.



2 If touch the Rename button, displays the screen shown left, then input the file name to be renamed.
By touching the following button, input text type is changed.

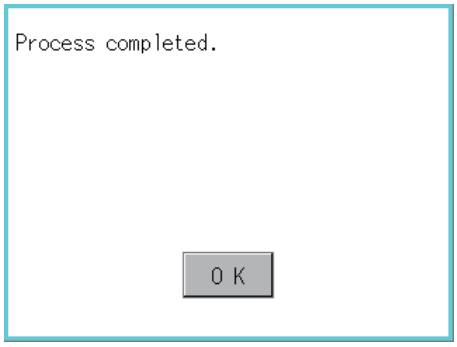
A-Z :English capital

0-9 :Numeric/Symbol



3 If touch the Enter button, displays the dialog shown left.

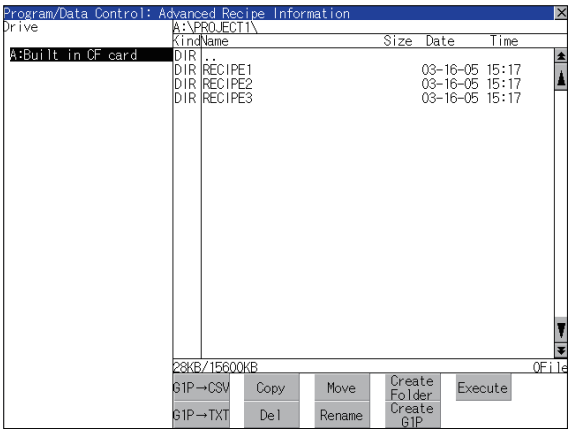
4 If touch the OK button, starts renaming file.
(While executing, "Processing..." message appears on the screen.)



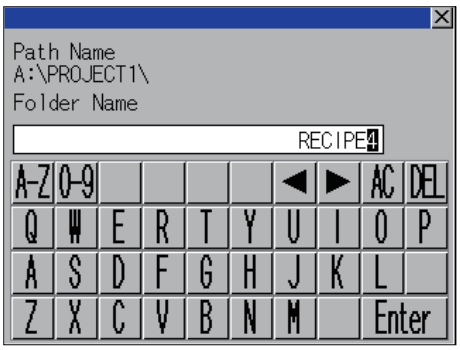
5 When renaming is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.

7 Folder create operation

Folder to be used in advanced recipe is created.



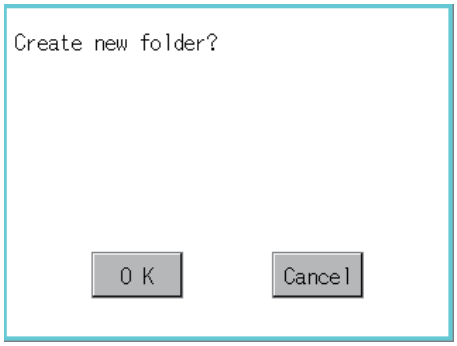
1 Touch the [Create Folder] button.



2 The input key window shown left appears, then input the file name to be created.
By touching the following button, input text type is changed.

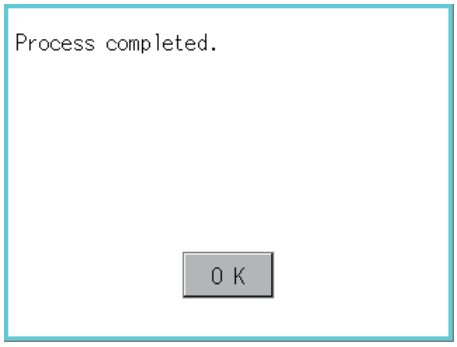
[A-Z]:English capital

[0-9]:Numeric/Symbol



3 If touch the [Enter] button, displays the dialog shown left.

4 If touch the [OK] button, starts creating folder.

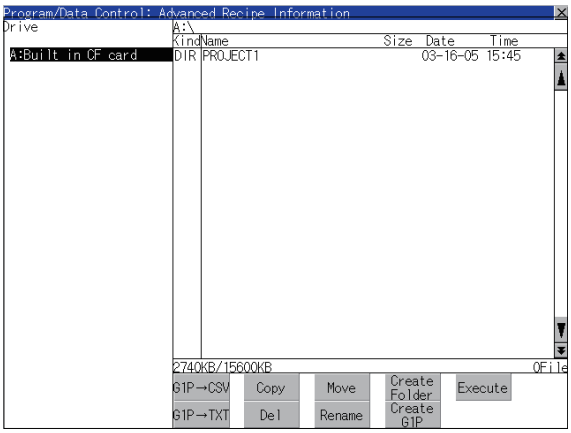


5 When creating folder is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

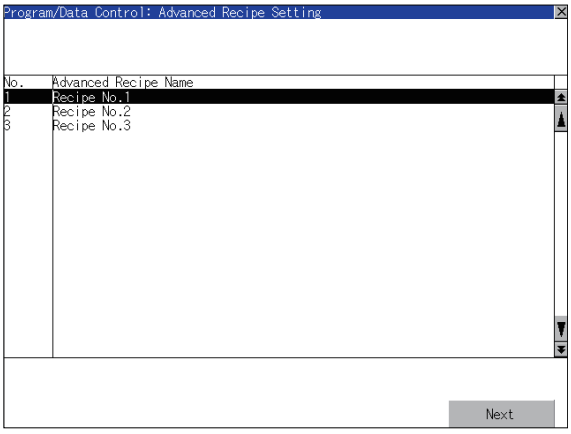
8 G1P file create operation

Advanced recipe file (G1P file) is created.

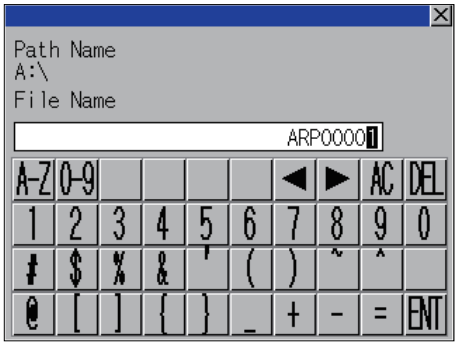
When advanced recipe is only executed on Utility, advanced recipe file should be created with this function in advance.



1 Touch the Create G1P button.



2 The screen to select the advanced recipe setting is displayed.
Select the advanced recipe setting to be used for new file.
After selecting, touch the Next button.

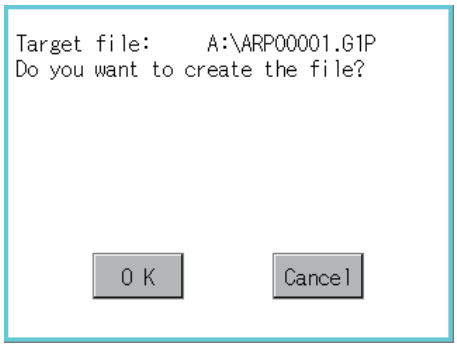


3 As the input key window is displayed, input the file name for new file.
By touching the following button, input text type is changed.

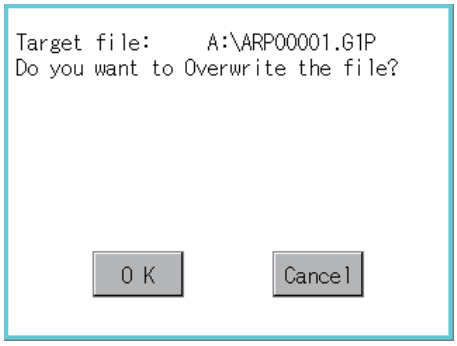
A-Z :English capital

0-9 :Numeric/Symbol

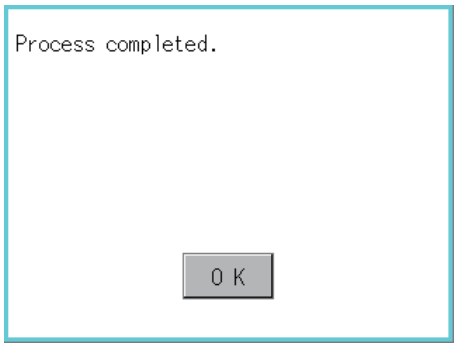
(Continued to next page)



4 If touch the Enter button, the dialog shown left is displayed.
Touch the OK button.



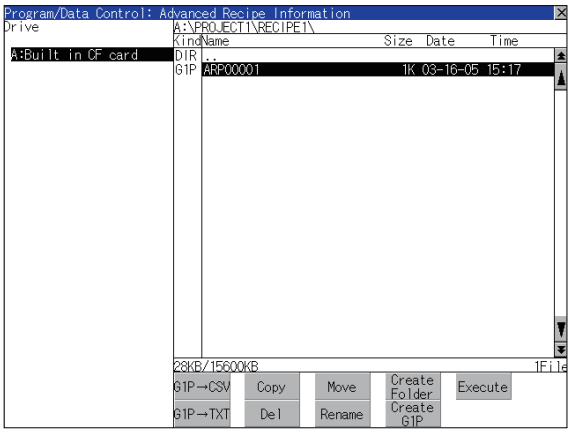
5 When the file, whose name is the same, exists in the destination folder, the dialog shown left appears without starting the creation.
Touching the OK button overwrites the file.
If touch the Cancel button, cancels creating.



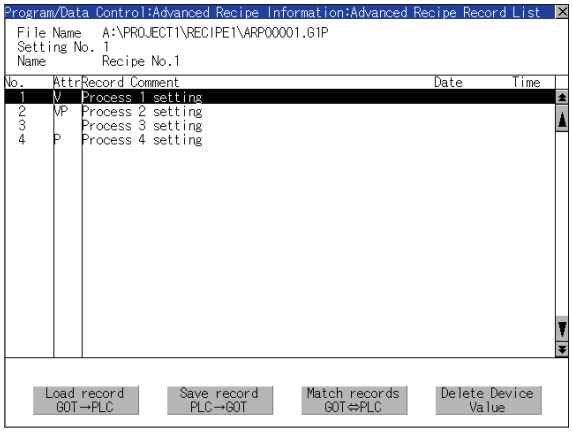
6 When creating is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.

9 Record load operation

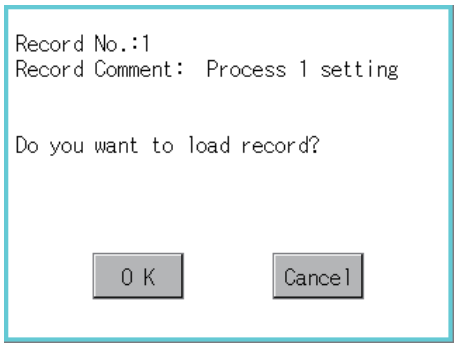
Selected record value is loaded in the device of controller.



1 Select the recipe file and touch the [Excute] button.

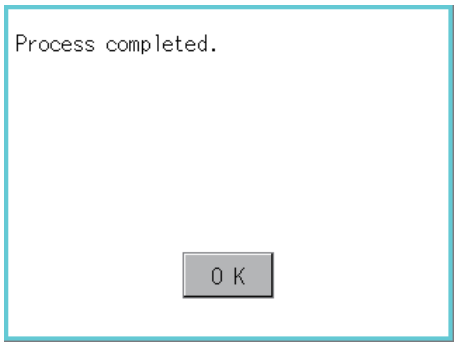


2 As the Advanced Recipe Record List screen is displayed, select the record comment to which you want to load the device value.



3 If touch the [Load record GOT→PLC] button, the dialog shown left is displayed.

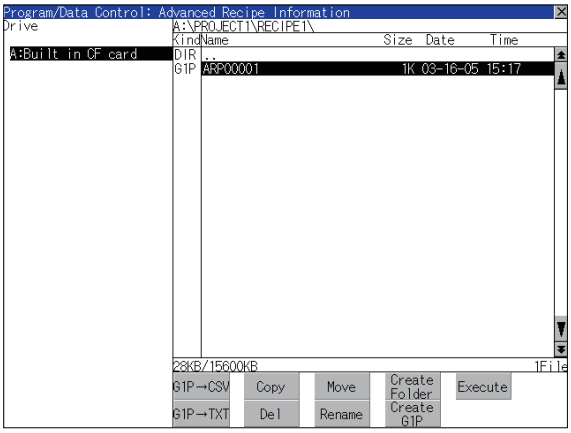
4 If touch the [OK] button, starts loading record.



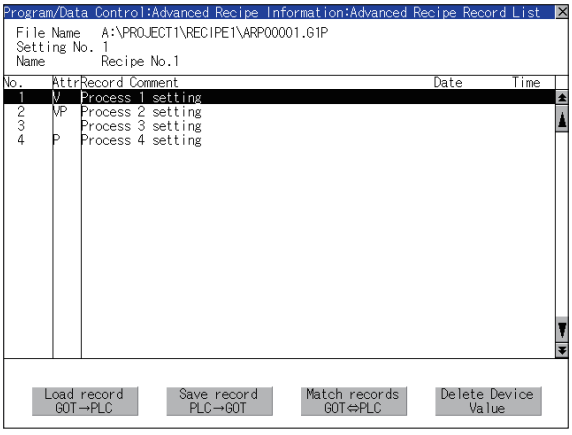
5 When loading is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

10 Record save operation

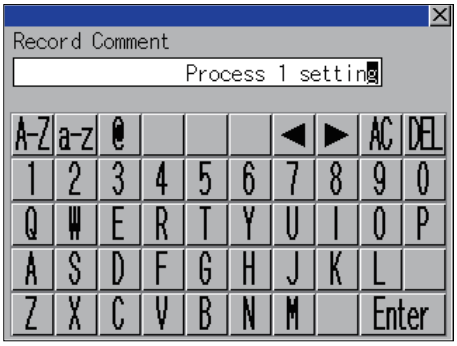
Device value of a controller is saved in the selected record.



1 Select the recipe file and touch the [Excute] button.



2 As the Advanced Recipe Record List screen is displayed, select the record comment for saving the device value.



3 If touch the [Save record PLC→GOT] button, the screen shown left is displayed.
For changing the record comment of saving destination, input the record comment.
By touching the following button, input text type is changed.

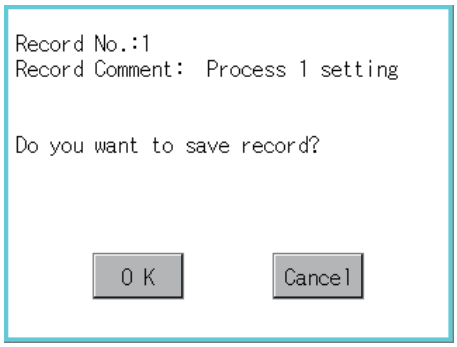
[A-Z]:English capital

[a-z]:English minuscule

[0-9]:Numeric/Symbol

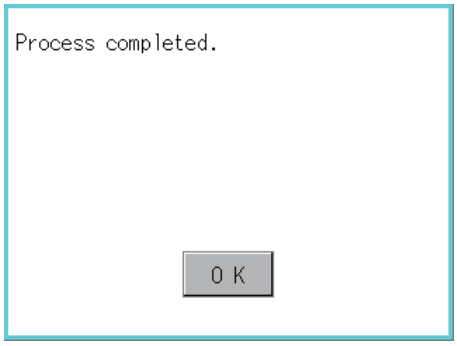
Other than alphanumeric and symbol can not be inputted.
If record comment is not changed, it is not need to input.

(Continued to next page)



4 If touch the Enter button, the dialog shown left is displayed.

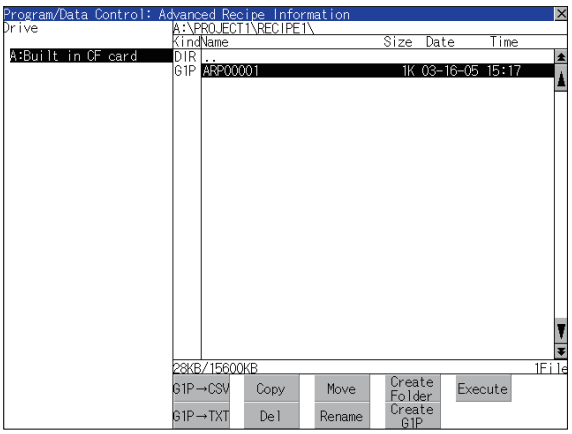
5 If touch the OK button, starts saving record.



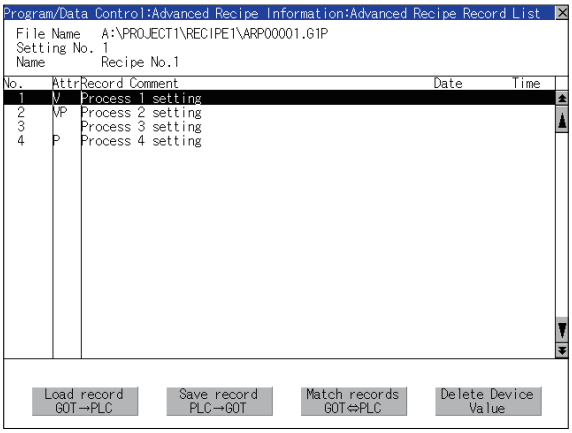
6 When saving is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.

11 Record match operation

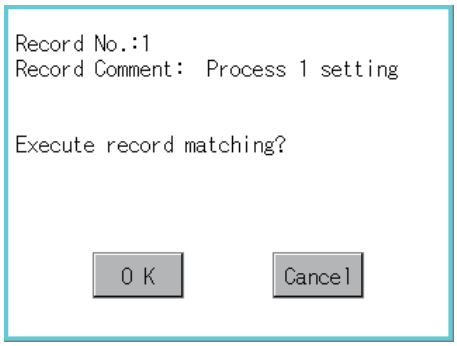
Verifies weather selected record matches to the device value of the controller.
After executing loading/saving with advanced recipe, verifies weather its contents are reflected.



1 Select the recipe file and touch the Excute button.



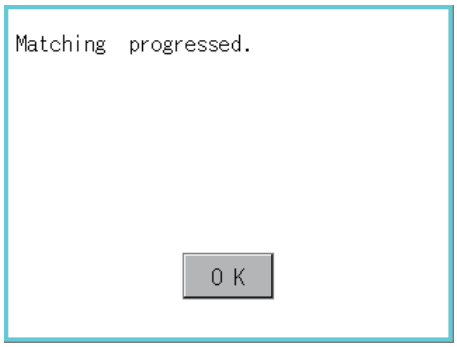
2 As the Advanced Recipe Record List screen is displayed, select the record comment for matching the device value.



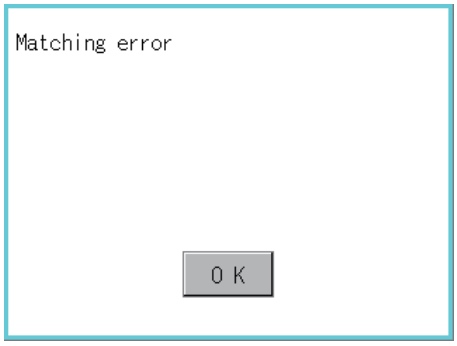
3 If touch the Match records GOT↔PLC button, dialog shown left is displayed.

4 If touch the OK button, starts matching record.

(Continued to the next page)



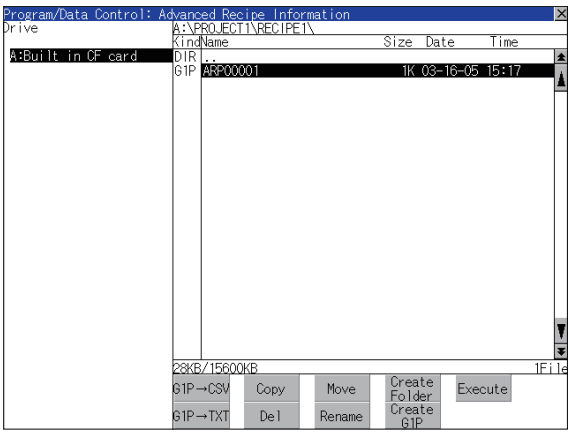
5 When matching is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.



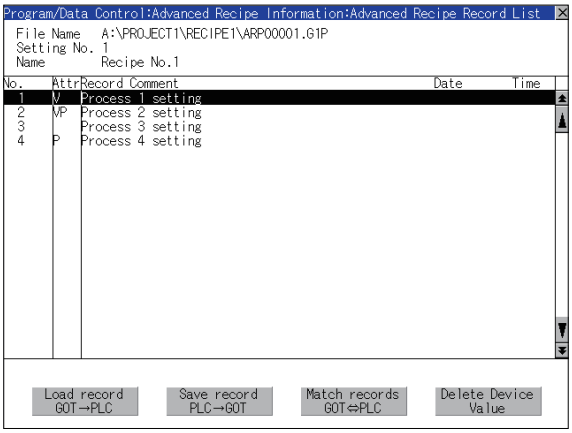
6 If selected record does not match to the device value of controller, the dialog shown left is displayed.

12 Device value delete operation

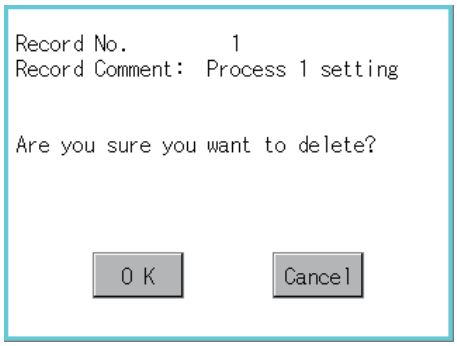
The device value of selected record is deleted (without value) and changed to record only for reading. (The record name is not deleted.)



1 Select the recipe file and touch the [Excute] button.

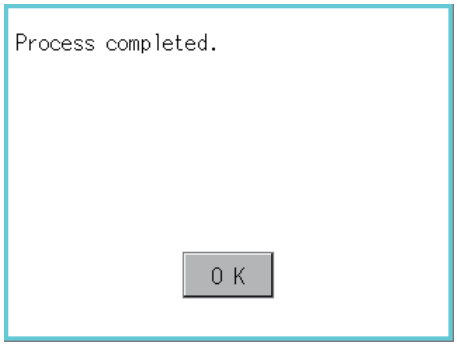


2 As the Advanced Recipe Record List screen is displayed, select the record comment to be deleted.
(If the data of which attribution contains "P" can not be deleted.)



3 If touch the [Delete Dvice Value] button, the dialog shown left is displayed.

4 If touch the [OK] button, starts deleting device value.
(The "Processing..." message is displayed on the screen.)



5 When deleting is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

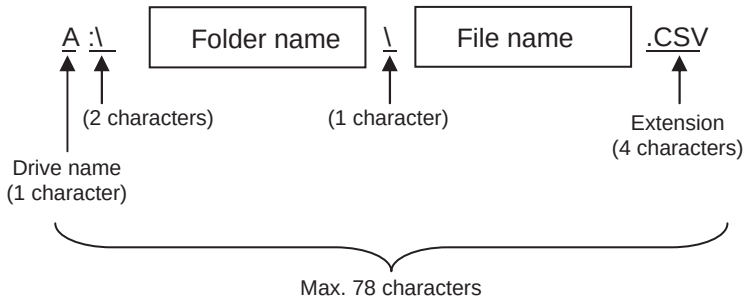
13.7.5 Precautions

1 Precautions for create/delete

(1) When creating folder/file

(a) Number of characters set for folder or file name.
GOT recognizes file location according to path explained below.
Specify folder or file name, and total characters of path cannot exceed 78 characters.
Users only can rename folder or file name.
(Other than folder/file name is automatically printed.)

Example, CSV file Path in memory card (for GT15)



Remark

If folder is assigned the hierarchy.

The \ mark is displayed between folder name and folder name, folder name and file name.
The \ mark is also counted as one character.

(b) Character strings that cannot be set
The following character strings cannot be used as a folder name or a file name. Even small characters of those cannot be used.

- COM1 to COM9
- LPT1 to LPT9
- AUX
- CON
- NUL
- PRN
- CLOCK$

In addition, the folder/file name showed below cannot be used.

- The folder name which begins with G1.
- Folder name and file name which begin with . (period).
- Folder name and file name which finish with . (period).
- Folder name and file name which have only . (one period) or ..(two periods).

(2) For deleting the folder
The folder in which the file exists cannot be deleted.
Delete the folder after having deleted the files.
In addition, on the advanced recipe information screen, the file other than that for advanced recipe is not displayed on GOT. When the folder, in which there is no file displayed on the screen, cannot be deleted, confirm whether there is other file in memory card by using personal computer, etc.

2 Precautions for operation

(1) Precautions during folder/file operation (Create/Delete/Copy/File output, etc)
Even if CF card access switch has been turned OFF while GOT is processing folders and files, the processing continues to be executed.
(Example: Even if CF card access switch has been turned OFF while GOT is creating a folder, the folder is created.)
Therefore, do not pull out the CF card while the "Processing..." message is on the screen after CF card access switch has been turned OFF.

(2) While GOT is accessing to other file (Alarm data, etc)
When folder/file processing for the advanced recip is excecuted while the GOT is in access to other file (CF card access LED ON), the GOT executes folder/file processing for the Advanced Recipe after the processing for other file has completed.
Therefore, it may take some time to finish the process of advanced recipe folder/file.
(The "Processing..." message is displayed on the screen.)

Remark

Estimation of processing time

The process may take time depending on the setting of advanced recipe file to be operated. (The more number of blocks increases, the longer it takes to process advanced recipe folder/file.)

(Reference value)
Direct connection to QCPU and CPU(device point:32767 points setting, transmission speed: 115200bps)

- When the block setting number to1: about 17 seconds
- When the block setting number to 2048: about 4 minutes

(3) For executing the saving/loading of device value with advanced recipe file which has been moved or whose name has been changed.
Adjust [Recipe File] setting of advanced recipe setting with GT Designer2 to file which has been moved or whose name has been changed.
After the setting has been changed, download the advanced recipe setting to GOT.

13.8 Logging Information

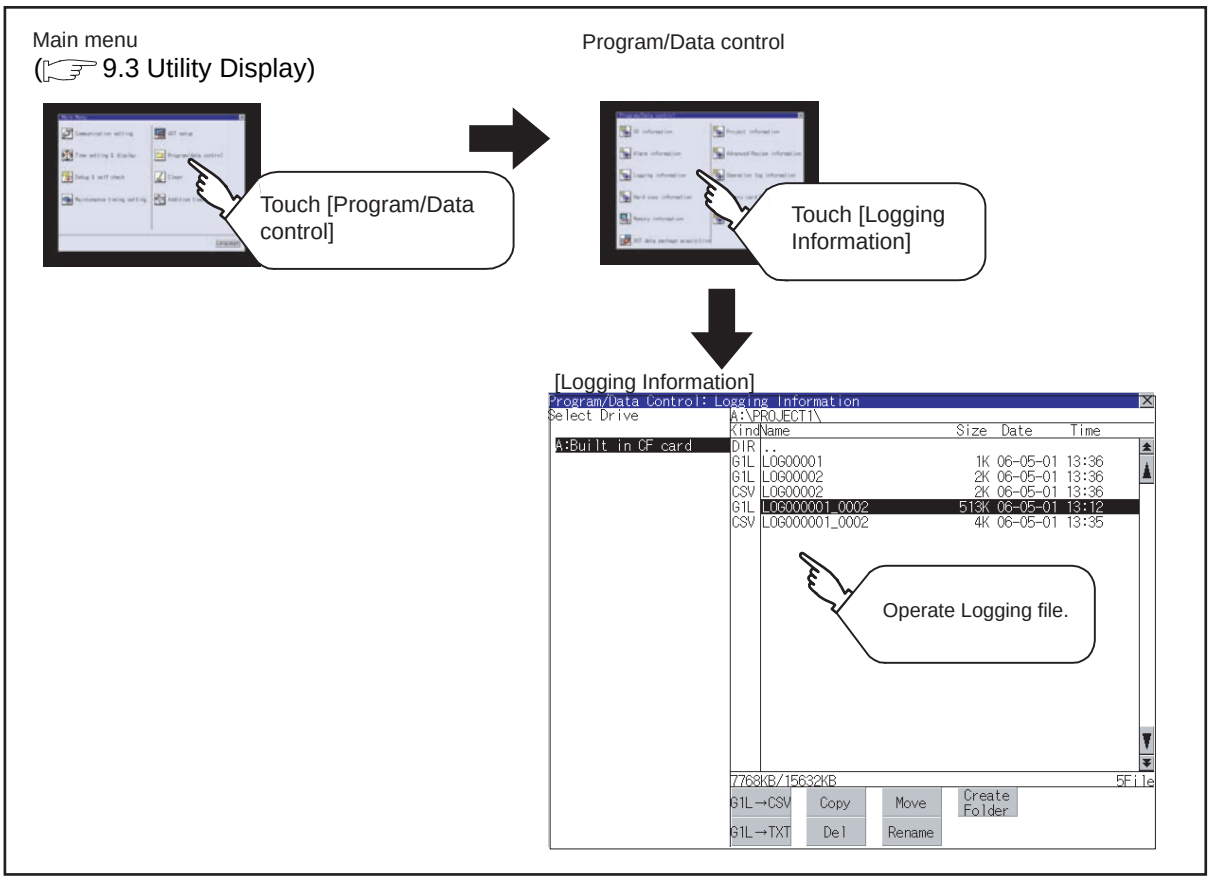
13.8.1 Function of logging information

Logging files created with the logging function can be copied, deleted or renamed, etc.
Without using a personal computer, you can manage logging files on the GOT.
For details of the logging function, refer to the following manual.

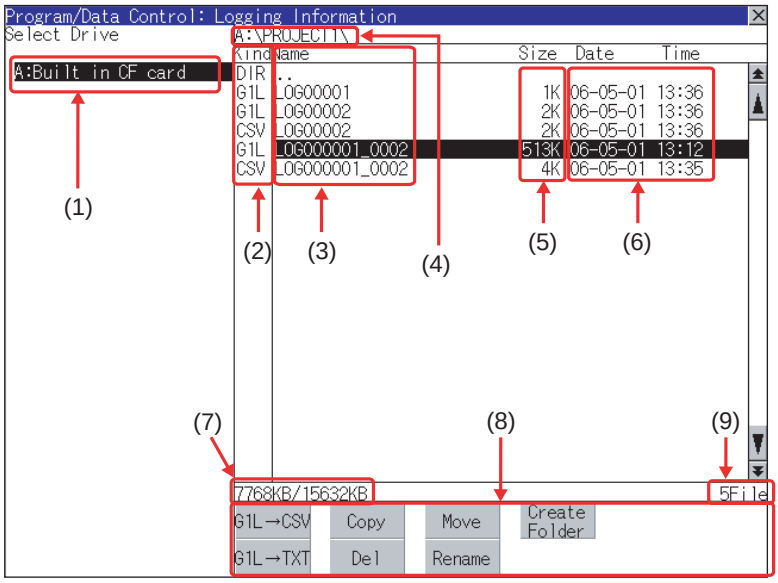
☞ GT Designer2 Version□ Screen Design Manual (11.3 Logging Function)

Function	Description	Refer to
Displaying file, folder data	The file/folder name, data size and creating date & time are displayed.	13-70,13-71
G1L → CSV conversion	G1L file of logging file is converted to CSV file.	13-72
G1L → TXT conversion	G1L file of logging file is converted to Unicode text file.	13-72
Del	File or folder is deleted.	13-74
Copy	File is copied.	13-75
Move	Folder is moved.	13-76
Rename	File name is changed.	13-78
Create Folder	New folder is created.	13-79

13.8.2 Display operation of logging information



13.8.3 Example of logging information display



Number	Item	Description
(1)	Drive	The target drive can be selected. (Even if CF card is not installed, this message appears.)
(2)	Kind	Indicates whether the displayed name is file or folder. In case of file, displays the extension; in case of folder, displays "DIR".
(3)	Name	Displays the file name or folder name. For the long file/folder name, entire part may not be displayed. Confirm the nondisplayed part with the Rename button, etc. (☞ 13.8.4 6 Rename operation) After confirmation, touch the Cancel button to cancel the operation.
(4)	Path name	Displays the path name of drive/folder which is currently displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Creating date & time	The date and time when each file was created are displayed.
(7)	Drive size	Displays the used/entire size of drive selected by select drive.
(8)	Operation switch	Execution switch of each function.
(9)	Number of folders and files	Displays the total number of the displayed files and folders.

Point

About the displayed file

The files other than that for logging are not displayed on the logging information screen.

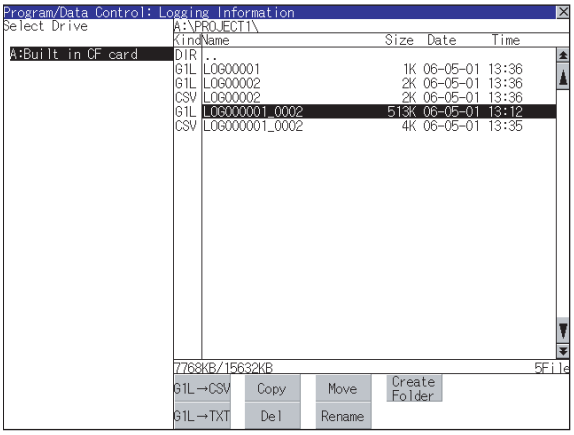
Remark

Folders and files displayed

For the folders and files displayed, refer to the following.

☞ 13.1.5 Display file

1 Display operation of logging information



1 If touch a drive of select drive, the information of the touched drive is displayed.

2 If touch a folder name, the information of the touched folder is displayed.

3 If touch a folder of ". .", the information of the folder of the one upper hierarchy is displayed.

4 If touch ▲ ▼ button of the scrollbar, the screen scrolls up/down by one line.
If touch ⏫ ⏬ button, the screen scrolls up/down by one screen.

5 If touch a file name, the file is selected.

6 For operation of operating switches, refer to the following.

G1L → CSV ,

G1L → TXT ..... this section 2

Delete ..... this section 3

Copy ..... this section 4

Move ..... this section 5

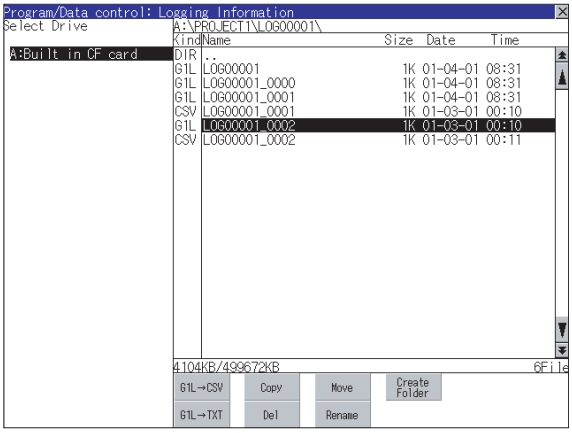
Rename ..... this section 6

Create Folder ..... this section 7

7 If touch ☒ button, the screen is closed.

2 Operation of G1L → CSV conversion G1L → TXT conversion

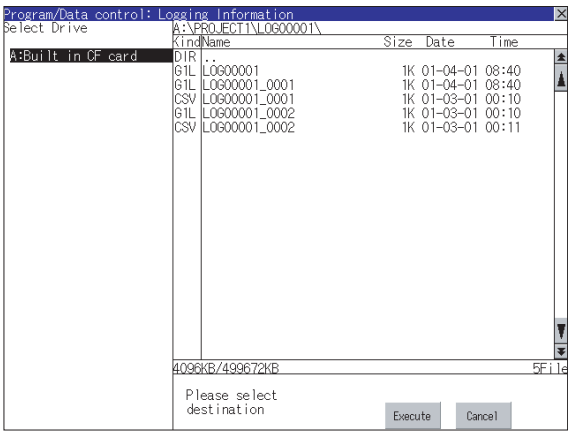
Logging file (G1L file) is converted to CSV file or Unicode text file that can be displayed/edited on personal computer.



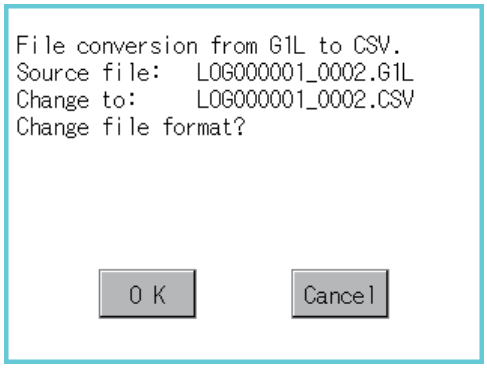
1 Touch and select the G1L file which is to be converted to CSV file or Unidcode text file.

2 Touch the following button in accordance with destination file type.

- CSV file : G1L->CSV button
- Unicode text file : G1L->TXT button



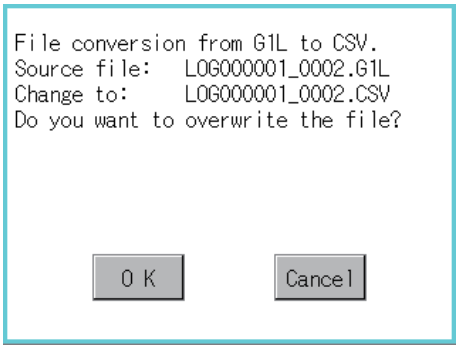
3 Select the target folder.
(Selecting a folder is not needed for outputting directly below the drive.)

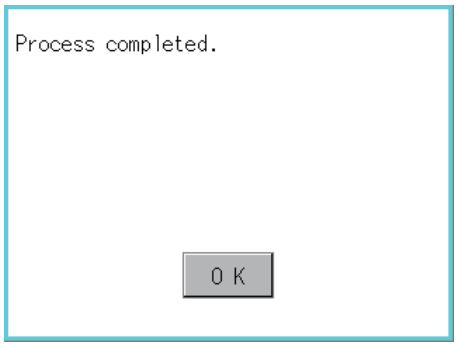


4 If touch the Excute button, the dialog shown left is displayed.
Touch the OK button.
(While executing, "Processing..." message appears on the screen.)

(Example: Dialog if the G1L->CSV button is touched.)

(Continued to next page)



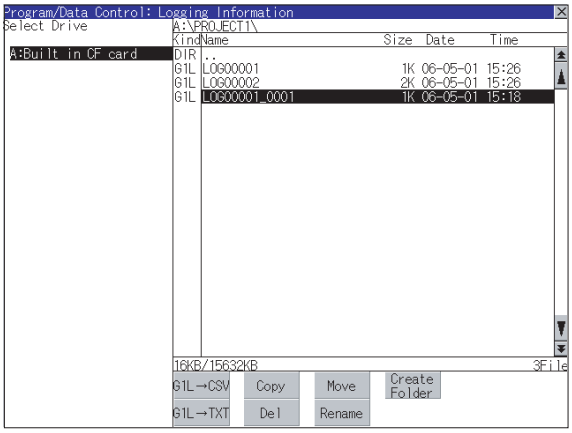


5 When the file, whose name is the same, exists in the destination folder, the dialog shown left appears without starting the conversion. If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels the conversion.

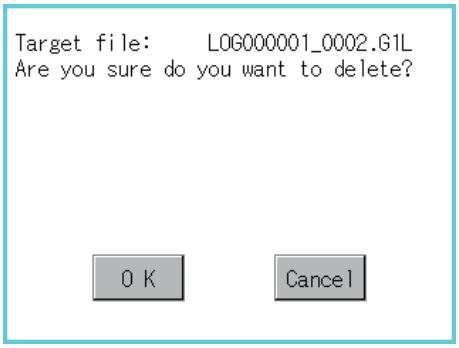
6 The message of completion is displayed in dialogue when conversion is completed.
If touch [OK] button, the dialog is closed.

3 Delete operation

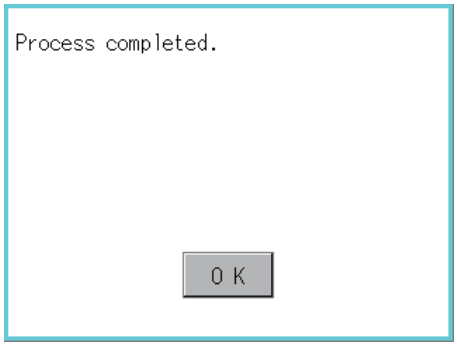
Folder and file to be used on logging are deleted.



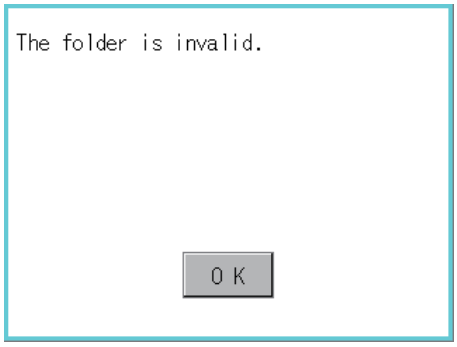
1 Touch and select the file/folder to delete.



2 If touch [Del] button, the dialog mentioned left is displayed.
If touch [OK] button, the file/folder is deleted.
(While executing, "Processing..." message appears on the screen.)
If touch [Cancel] button, the deletion is canceled.



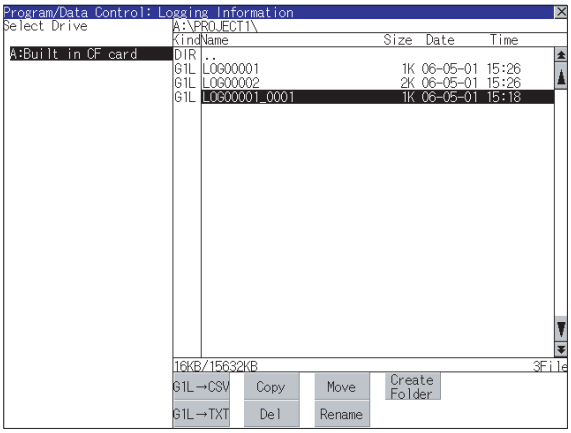
3 When the deletion is completed, the completion dialog is displayed.
If touch [OK] button, the dialog is closed.



4 When it cannot be deleted, the dialog showed at left appears. (Only when deleting folder is executed.)
Verify that there is no file in the folder and execute the delete operation again.
(☞ 13.11.5 Precautions)

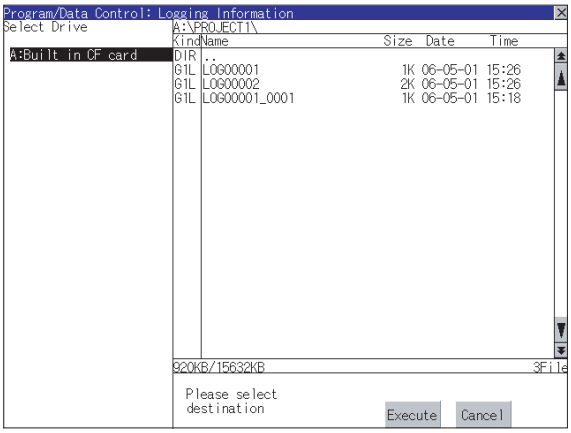
4 Copy operation

Folder to be used in logging is copied.

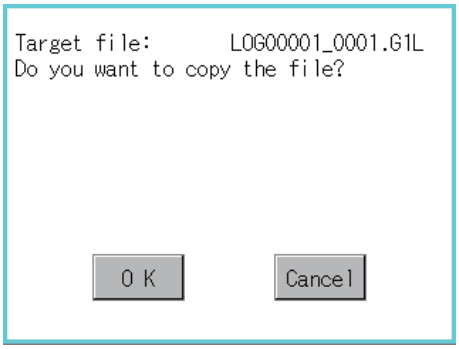


1 Touch and select the file to copy.

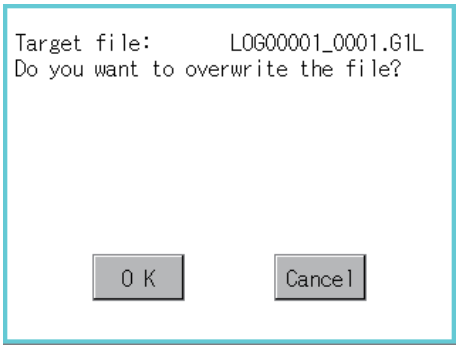
2 Touch the [Copy] button.



3 Select the target folder.
(Selecting a folder is not needed for outputting directly below the drive.)
At this time, it cannot be copied into the same folder where the file exists.
Select other folders.

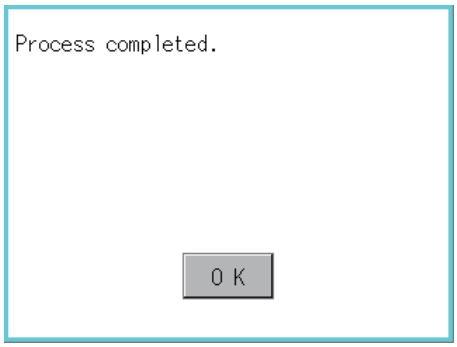


4 If touch [Excute] button, the following dialog shown left is displayed.
Touch [OK] button.
(While executing, "Processing..." message appears on the screen.)



5 If there is a file of the same name in the copy destination folder, the following dialog is displayed without starting the copy.
If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels to copy.

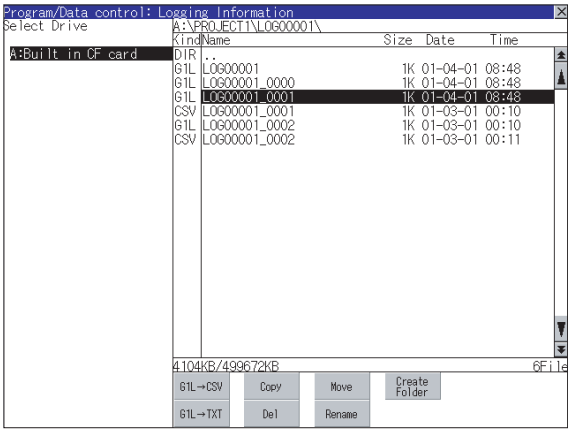
(Continued to next page)



6 When the copy is completed, the dialog of completion is displayed.
If touch OK button, closes the dialog.

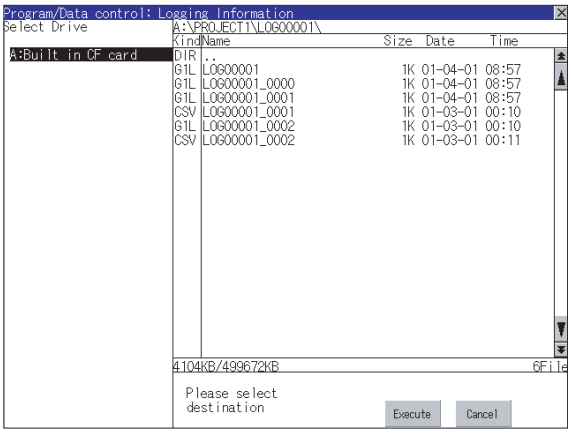
5 Move operation

An operation log file is moved.



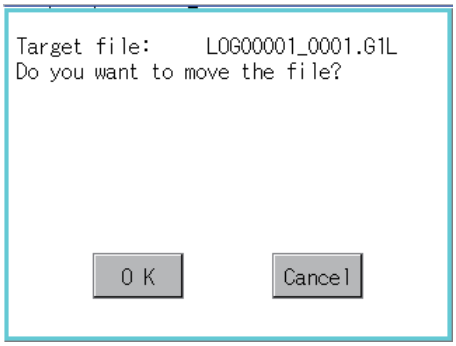
1 Select the file to be moved by touching it.

2 Touch the Move button.

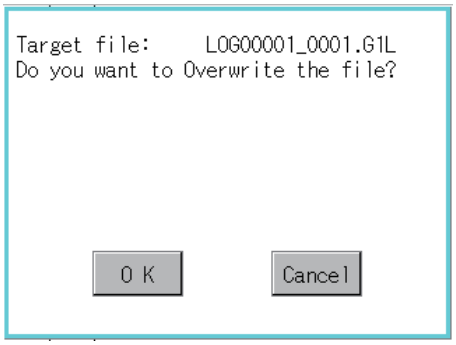


3 Select the target folder.
(Selecting a folder is not needed for moving directly below the drive.)

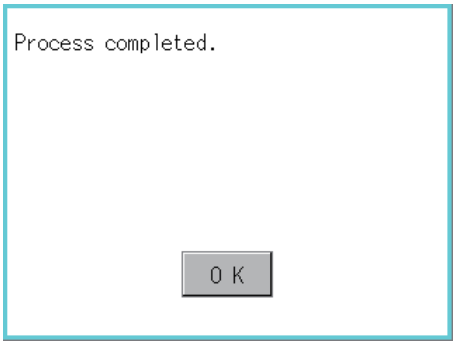
(Continued to next page)



4 If touch the [Execute] button, the dialog shown left is displayed.
Touch the [OK] button.
(While executing, "Processing..." message appears on the screen.)



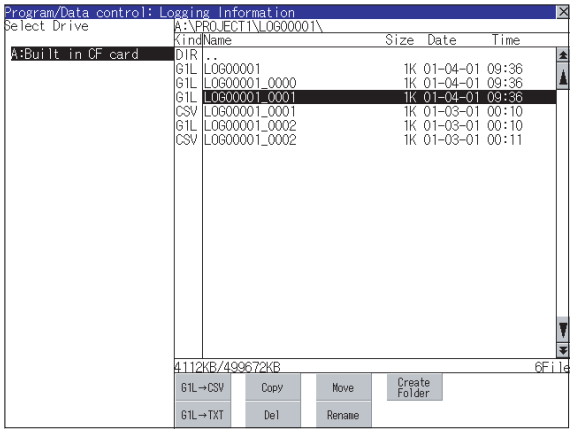
5 When only file with the same name exists in the destination folder, the dialog shown left appears without starting the movement.
Touching the [OK] button overwrites the file.
If touch the [Cancel] button, cancels moving.



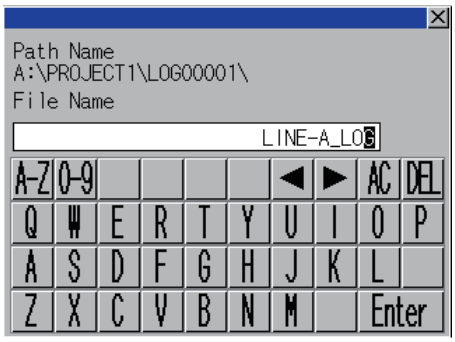
6 When moving is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

6 Rename operation

An operation log file is changed.



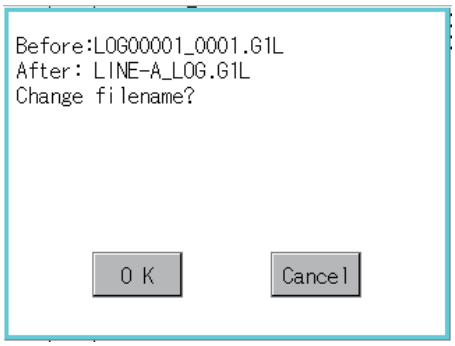
1 Select the file to be renamed by touching.



2 If touch the Rename button, displays the screen shown left, then input the file name to be renamed.
By touching the following button, input text type is changed.

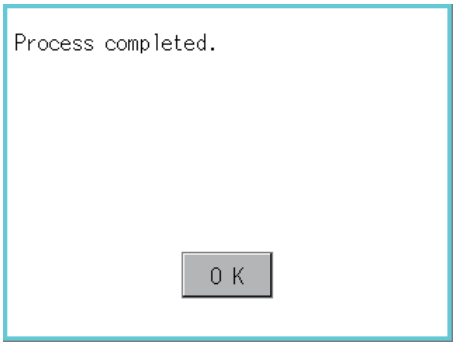
A-Z :English capital

0-9 :Numeric/Symbol



3 If touch the Enter button, displays the dialog shown left.

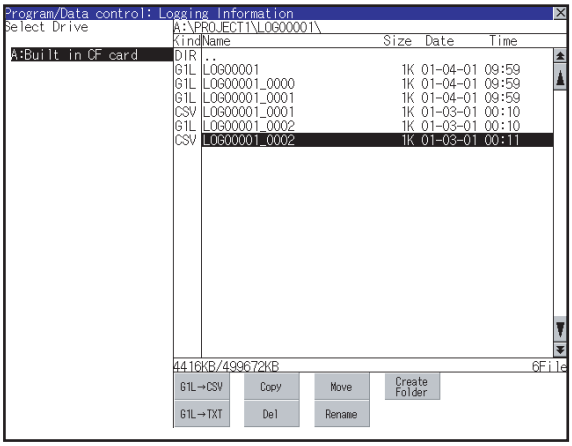
4 If touch the OK button, starts renaming file.
(While executing, "Processing..." message appears on the screen.)



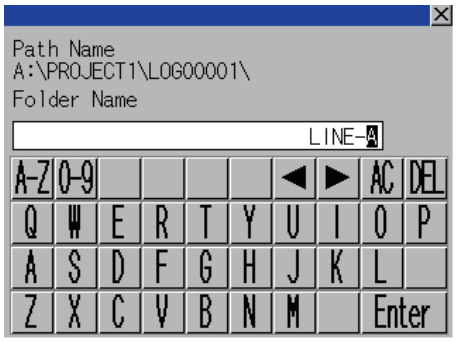
5 When renaming is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.

7 Folder create operation

An operation log folder is created.



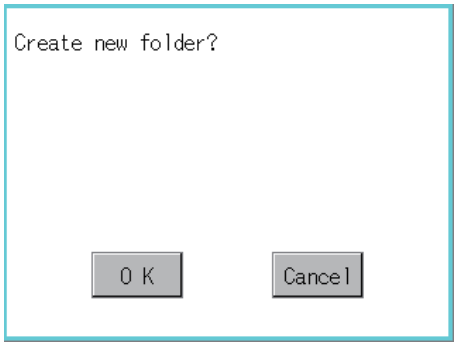
1 Touch the [Create Folder] button.



2 The input key window shown left appears, then input the file name to be created.
By touching the following button, input text type is changed.

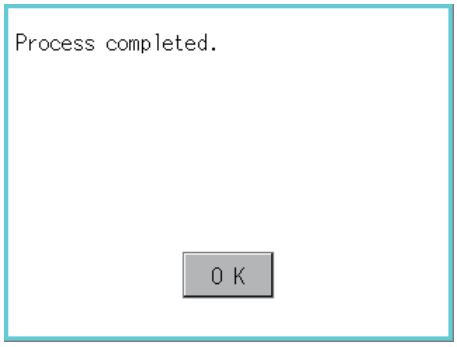
[A-Z] :English capital

[0-9] :Numeric/Symbol



3 If touch the [Enter] button, displays the dialog shown left.

4 If touch the [OK] button, starts creating folder.



5 When creating folder is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

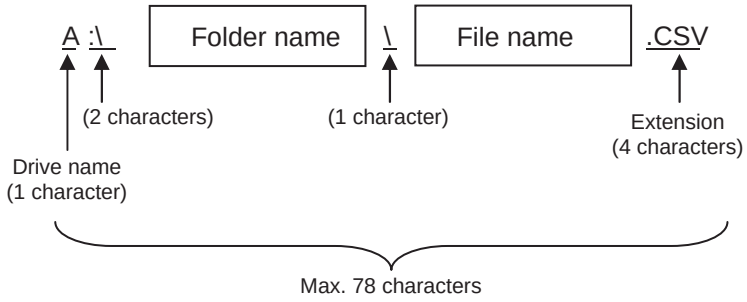
13.8.5 Precautions

1 Precautions for create/delete

(1) When creating folder/file

(a) Number of characters set for folder or file name.
GOT recognizes file location according to path explained below.
Specify folder or file name, and total characters of path cannot exceed 78 characters.
Users only can rename folder or file name.
(Other than folder/file name is automatically printed.)

Example, CSV file Path in memory card (for GT15)



Remark If folder is assigned the hierarchy.

The \ mark is displayed between folder name and folder name, folder name and file name.
The \ mark is also counted as one character.

(b) Character strings that cannot be set
The following character strings cannot be used as a folder name or a file name. Even small characters of those cannot be used.

- COM1 to COM9
- LPT1 to LPT9
- AUX
- CON
- NUL
- PRN
- CLOCK$

In addition, the folder/file name showed below cannot be used.

- The folder name which begins with G1.
- Folder name and file name which begin with . (period).
- Folder name and file name which finish with . (period).
- Folder name and file name which have only . (one period) or ..(two periods).

(2) For deleting the folder
The folder in which the file exists cannot be deleted.
Delete the folder after having deleted the files.
In addition, on the logging information screen, the files other than logging files are not displayed on GOT. When the folder, in which there is no file displayed on the screen, cannot be deleted, confirm whether there is other file in memory card by using personal computer, etc.

2 Precautions for operation

(1) Precautions during folder/file operation (Create/Delete/Copy/File output, etc)
Even if CF card access switch has been turned OFF while GOT is processing folders and files, the processing continues to be executed.
(Example: Even if CF card access switch has been turned OFF while GOT is creating a folder, the folder is created.)
Therefore, do not pull out the CF card while the "Processing..." message is on the screen after CF card access switch has been turned OFF.

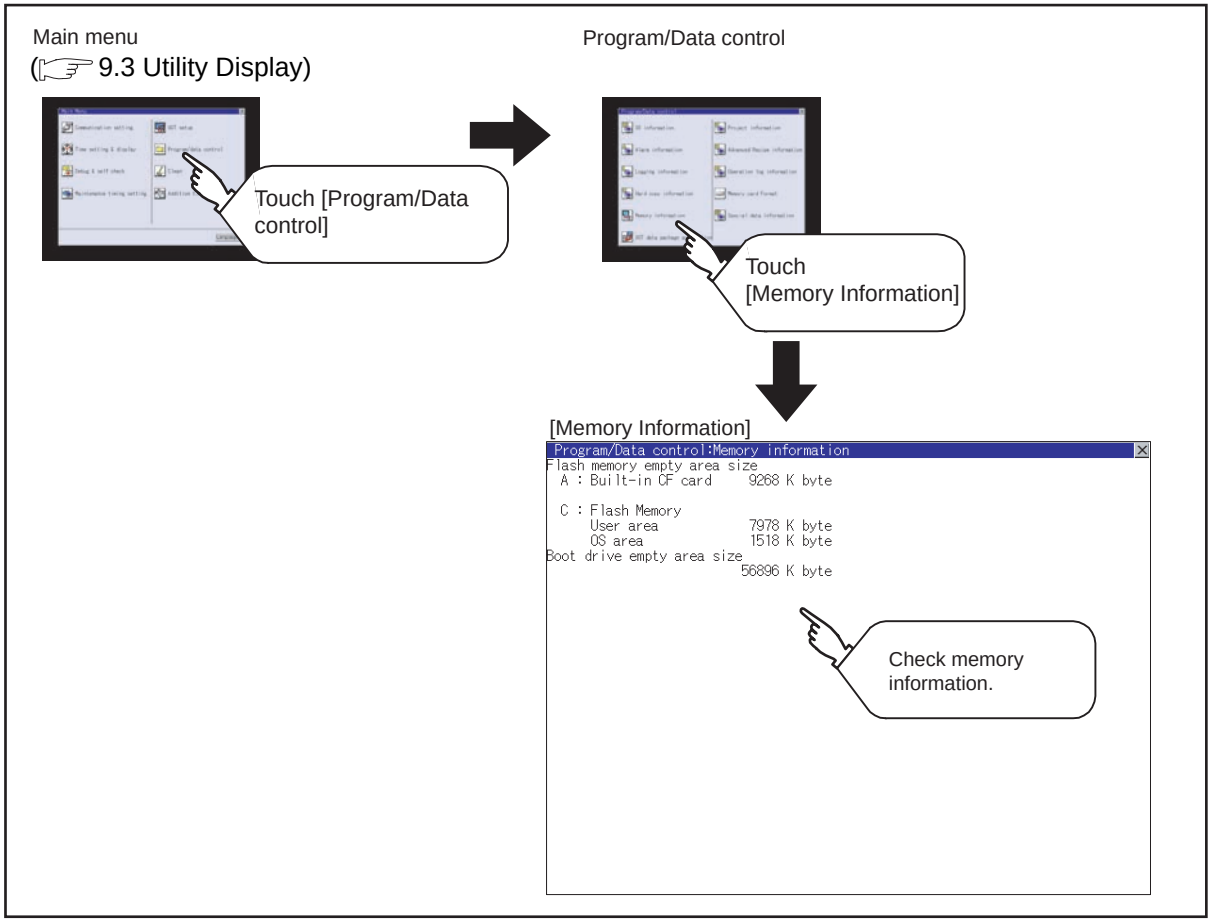
(2) While GOT is accessing to other file (Alarm data, etc)
When folder/file processing for the logging is excecuted while the GOT is in access to other files (CF card access LED ON), the GOT executes folder/file processing for the logging after the processing for other files is completed.
Therefore, it may take some time to finish the process of the logging folder/file.
(The "Processing..." message is displayed on the screen.)

13.9 Memory Information

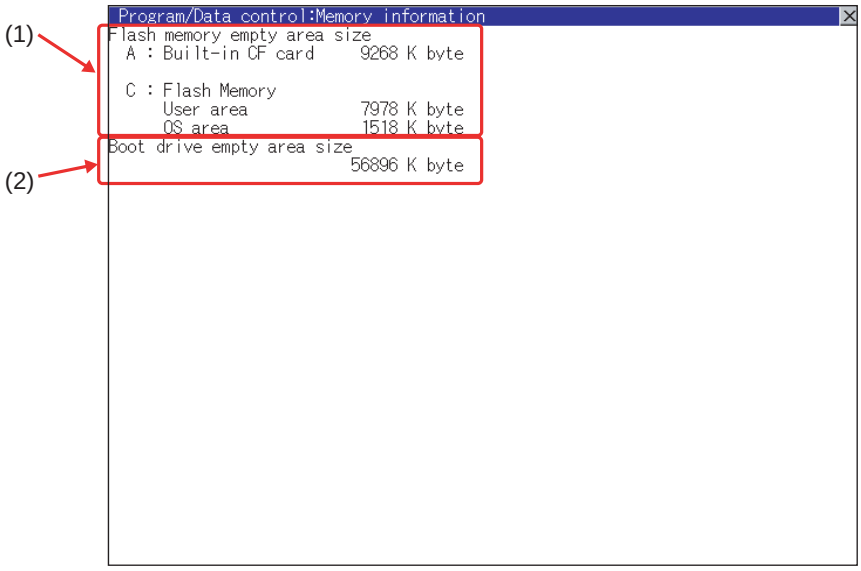
13.9.1 Memory information functions

Displays the flash memory empty area size available for the user of each drive and Boot drive empty area size.
Confirming memory empty space is enabled without connecting a personal computer.

13.9.2 Memory information display operation



13.9.3 Memory information display example



No.	Item	Description
(1)	Flash memory empty area size	Indicates the memory space of each drive available for the user to store files or folders. The [A: Standard CF Card] and [B: Memory card] are not displayed when CF card is not installed.
(2)	Boot drive empty area size	Indicates the empty area size of boot drive specified by the user.

13.10 Special Data Information

13.10.1 Special data information function

Special data used in the intelligent unit monitor function or others can be copied, deleted, downloaded, or uploaded.
For details of special data, refer to the following manual.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(8.1 Data Types and Sizes Transferred to the GOT)

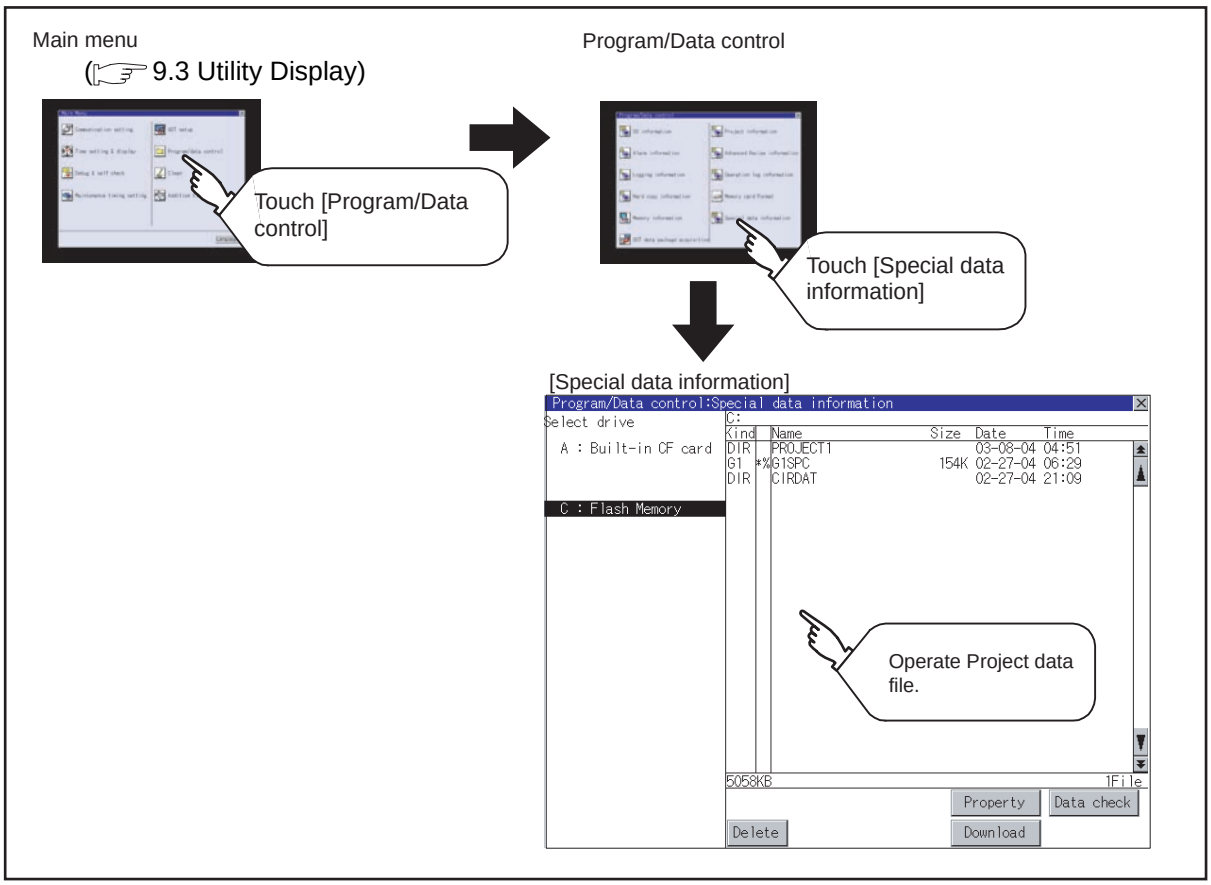
Function	Description	Reference page
Information display of files and folders	Displays the name, data size, creation date and time of file or folder.	13-87
Delete	Deletes a file or holder.	13-88
Property	Displays the property of special data.	13-89
Data check	Copies a file.	13-90
Download	Downloads the special data written in the A drive (Standard CF Card) / B drive (Extended memory card) to the C drive (Built-in flash memory).	13-91

Point

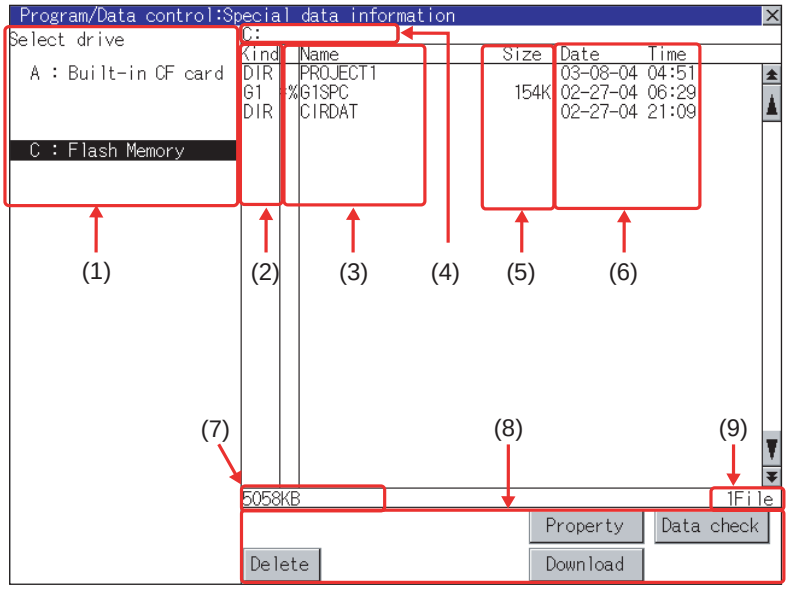
Precautions for operating special data

When the OS boot drive is set to [A: Standard CF Card], deleting and downloading special data are not available.

13.10.2 Special data information display operation



13.10.3 Special data information display example



Number	Item	Description
(1)	Select drive	The drive by which a file or folder is displayed can be selected. When the CF card is not installed, [A: Built-in CF card] and [B: Memory card] are not displayed.
(2)	Kind	Indicates whether the displayed name is file or folder. In the case of file, displays the extension; in the case of folder, displays "DIR".
(3)	Name	Displays the name of special data in the selected drive. When the name exceeds 18 characters, the 19th and later characters are not displayed. The special data being monitored on the GOT is preceded by "*%".
(4)	Path name	Displays the path name of drive /folder which is currently displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Date and time	Displays the date and time when each file is installed.
(7)	The size of drive	Displays the size in use and the entire size of the drive which is selected by drive selection.(Only the size in use is displayed when selecting the C drive.)
(8)	Operation switch	Displays switch of each function executable in the Special data information (download, upload, etc.).
(9)	Number of folders and files	Displays the total number of displayed files and folders.

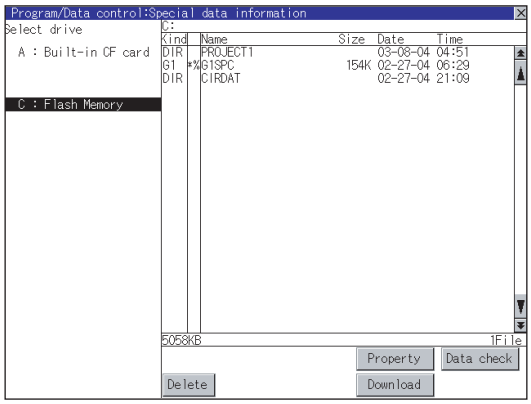
Remark Folders and files displayed

For the folders and files displayed, refer to the following.

13.1.5 Display file

13.10.4 Special data information operation

1 Special data information display operation



1 If touch a drive in [Select drive], the special data in the drive is displayed.

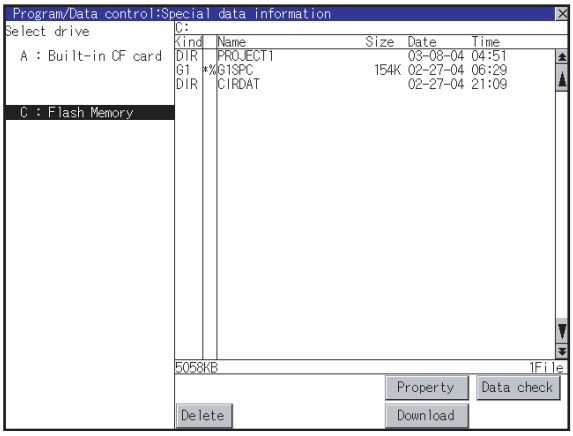
2 Refer to the following for operation of delete, property, data check and download.

- Delete ..... ☞ 2 in this section
- Property ..... ☞ 3 in this section
- Data check ..... ☞ 4 in this section
- Download ..... ☞ 5 in this section

3 Touching the ☒ button closes the screen.

2 Delete operation

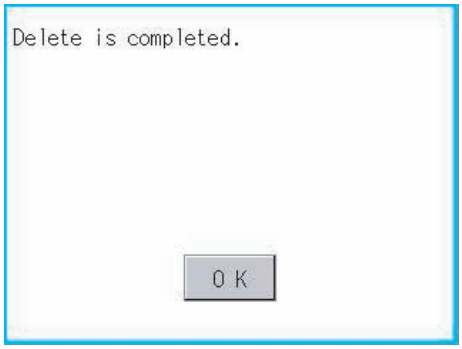
Deletes the selected file.



1 Touch and select the file to delete.



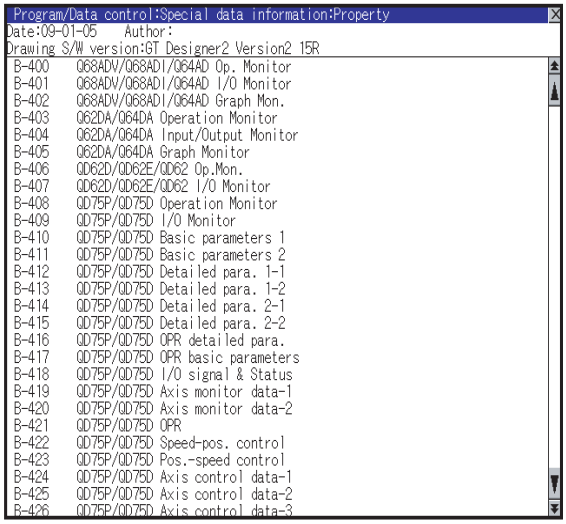
2 If touch the Delete button, the screen mentioned left is displayed.
Check if the deletion target file is specified correctly.
Touching the OK button deletes the file.
Touching the Cancel button cancels the deletion.



3 When the detection is completed, the dialog mentioned left is displayed.
If touch the OK button, the dialog is closed.

3 Property display operation

Displays the property of selected special data.



1 Touch the [Property] button after selecting a special data to display Property as shown left.

In Property display, the following information is displayed.

Item	Description
Date	Displays date and time of file creation.
Author	Displays the author of the project data.
Drawing S/W version	Displays name and version of the drawing software by which the project is created.

2 If touch the [▲][▼] button, the screen scrolls up/down line by one line.

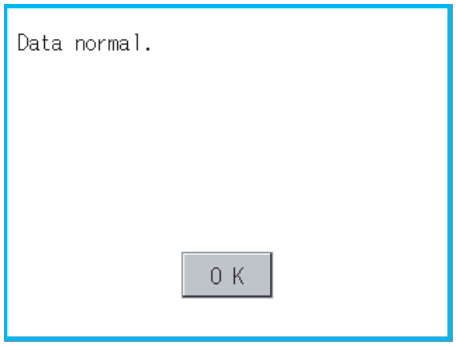
3 If touch the [⏫][⏬] button, screen scrolls up/down by one screen.

4 If touch the [×], the property display is closed and returned to the previous screen.

4 Data check operation

Checks the selected special data.

Dialog when data is normal



Dialog when data is error



1. Select a data check target file and touch the [Data check] button.
   The data check is executed and the result is displayed by the dialog shown left.
2. If touch the [OK] button the dialog is closed.

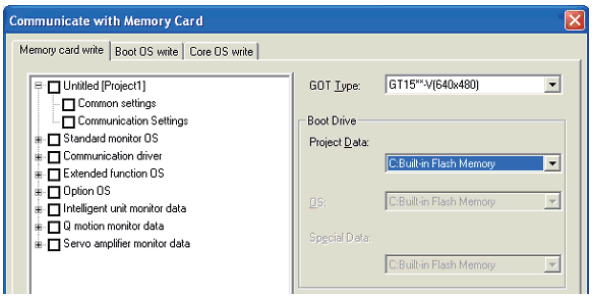
5 Download operation

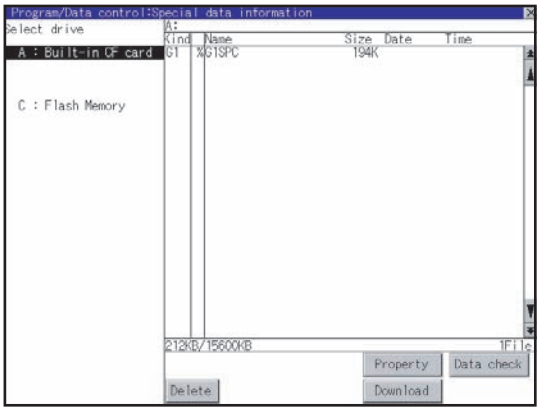
Transfers the special data written in the A drive (Standard CF Card) or B drive (Extended memory card) to the C drive (Built-in flash memory).
The GOT monitors C drive data.
(This item explains using the A drive.)

Point

Special data to be stored in a CF card

When storing the project data from GT Designer2 to CF card, select [C: Built-in flash memory] for [Project Data] in [Boot Drive].



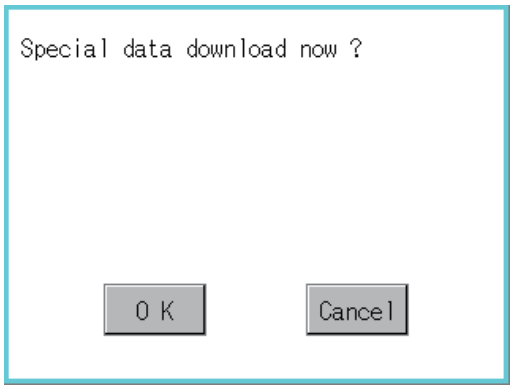


1 Install a CF card on the GOT
Refer to the following for inserting/ removing method of CF card.

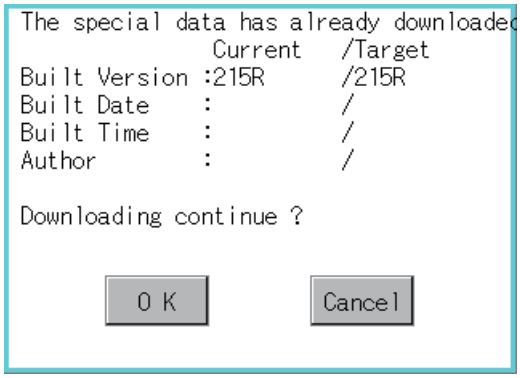
8.8 CF Card

2 Touch [A: Standard CF Card] in Select drive.

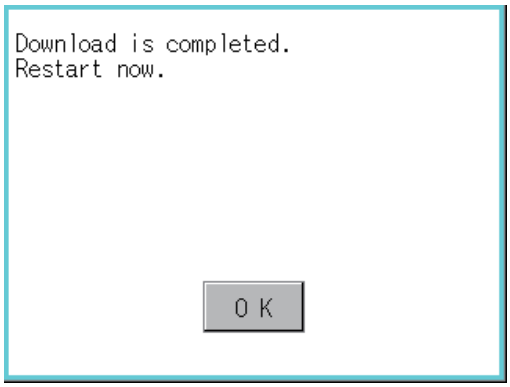
(Continued to next page)



3 If touch the Download button, the screen mentioned left is displayed. Downloading is executed when the OK button is touched.



4 If there is a project data of the same name in the C drive, the screen shown left is displayed.
If touch the OK button, the project data is downloaded and the project data in the C drive is overwritten. Downloading is canceled when the Cancel button is touched



5 When the downloading is completed, the dialog mentioned left is displayed.
Touching the OK button restarts the GOT.

13.11 Operation Log Information

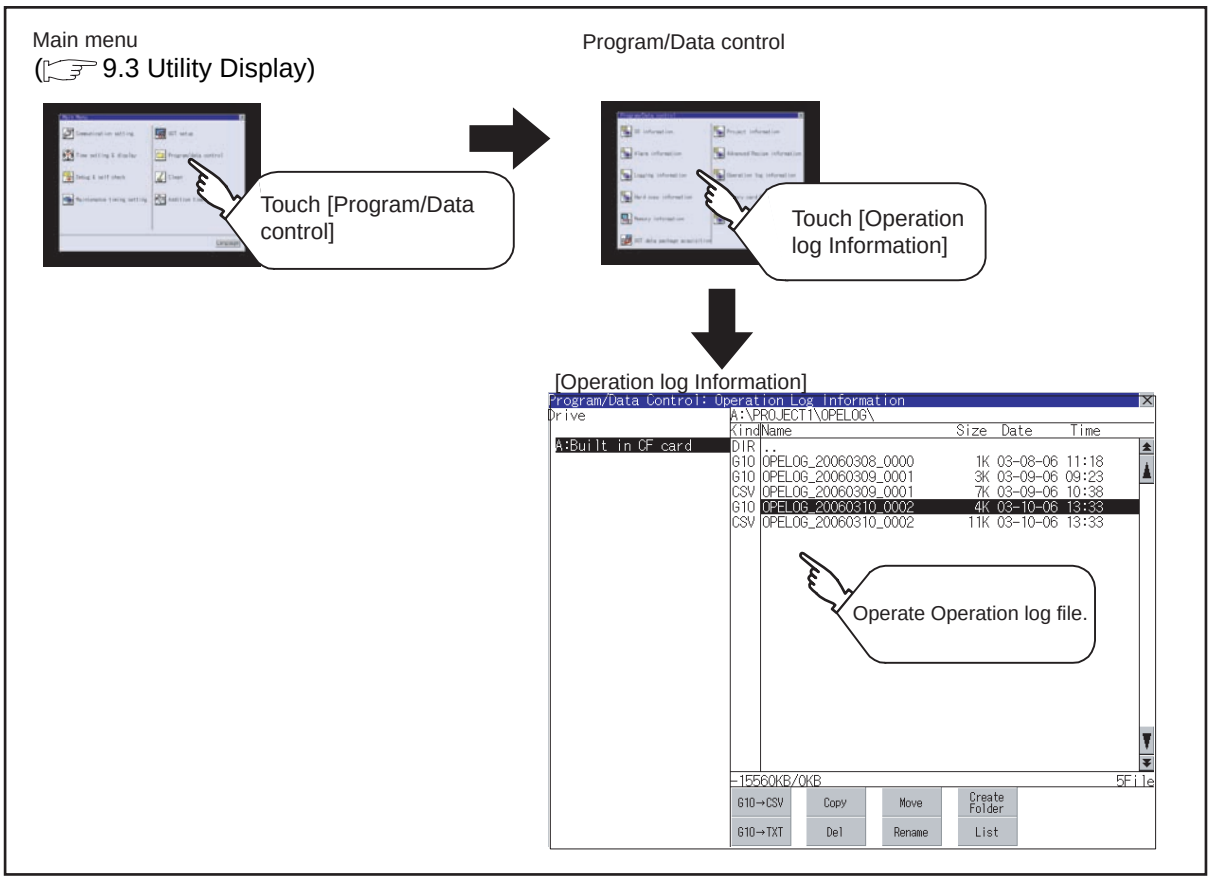
13.11.1 Function of operation log information

Operation log files created with the operation log function can be copied, deleted or renamed, etc. Without using a personal computer, you can manage operation log files on the GOT.
For details of the operation log function, refer to the following manual.

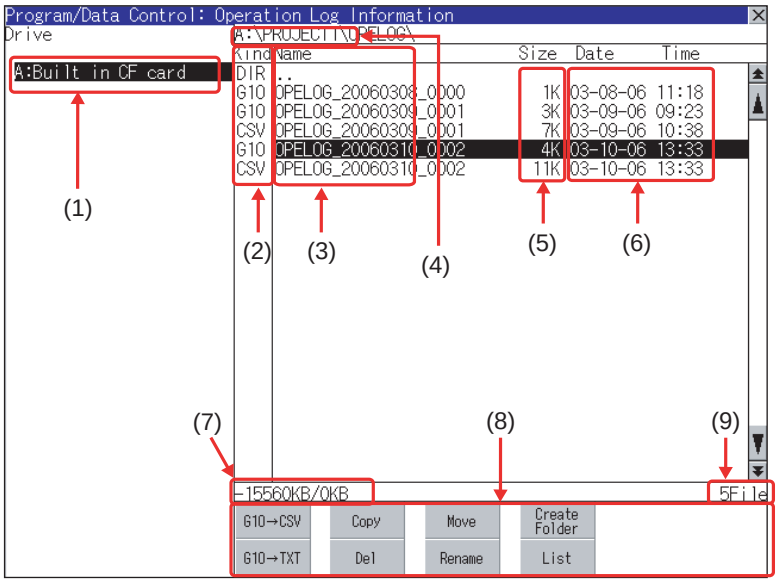
☞ GT Designer2 Version□ Screen Design Manual (15.2 Operation Log Function)

Function	Description	Refer to
Displaying file, folder data	The file/folder name, data size and creating date & time are displayed.	13-95,13-96
G1O → CSV conversion	G1O file of operation log file is converted to CSV file.	13-97
G1O → TXT conversion	G1O file of operation log file is converted to Unicode text file.	13-97
Del	File or folder is deleted.	13-99
Copy	File is copied.	13-100
Move	Folder is moved.	13-101
Rename	File name is changed.	13-103
Create Folder	New folder is created.	13-104
List	Displays operation logs in a list and allows searching.	13-105

13.11.2 Display operation of operation log information



13.11.3 Example of operation log information display



Number	Item	Description
(1)	Drive	The target drive can be selected. (Even if CF card is not installed, this message appears.)
(2)	Kind	Indicates whether the displayed name is file or folder. In case of file, displays the extension; in case of folder, displays "DIR".
(3)	Name	Displays the file name or folder name. For the long file/folder name, entire part may not be displayed. Confirm the nondisplayed part with the Rename button, etc. (☞ 13.8.4 6 Rename operation) After confirmation, touch the Cancel button to cancel the operation.
(4)	Path name	Displays the path name of drive/folder which is currently displayed.
(5)	Size	Displays the size of the file displayed in Name.
(6)	Creating date & time	The date and time when each file was created are displayed.
(7)	Drive size	Displays the used/entire size of drive selected by select drive.
(8)	Operation switch	Execution switch of each function.
(9)	Number of folders and files	Displays the total number of the displayed files and folders.

Point

About the displayed file

The files other than that for operation log are not displayed on the operation log information screen.

Remark

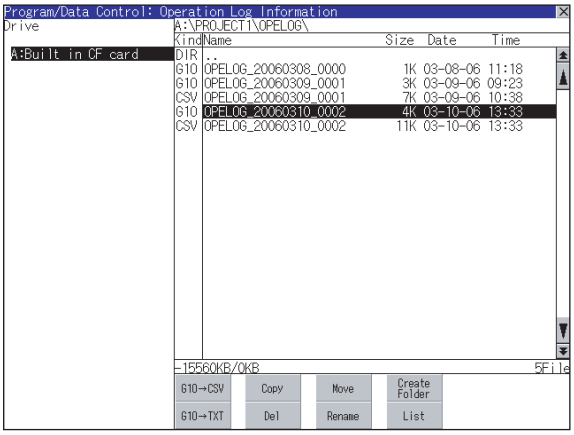
Folders and files displayed

Refer to the following for the details of folders and files displayed.

☞ 13.1.5 Display file

13.11.4 Operation log information operation

1 Display operation of operation log information



1 If touch a drive of select drive, the information of the touched drive is displayed.

2 If touch a folder name, the information of the touched folder is displayed.

3 If touch a folder of ". .", the information of the folder of the one upper hierarchy is displayed.

4 If touch ▲ ▼ button of the scrollbar, the screen scrolls up/down by one line.
If touch ⏫ ⏬ button, the screen scrolls up/down by one screen.

5 If touch a file name, the file is selected.

6 For operation of operating switches, refer to the following.

G1O → CSV,

G1O → TXT ..... ☞ this section 2

Delete ..... ☞ this section 3

Copy ..... ☞ this section 4

Move ..... ☞ this section 5

Rename ..... ☞ this section 6

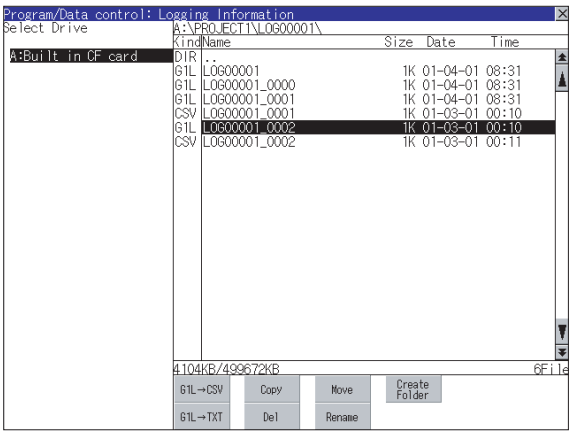
Create Folder ..... ☞ this section 7

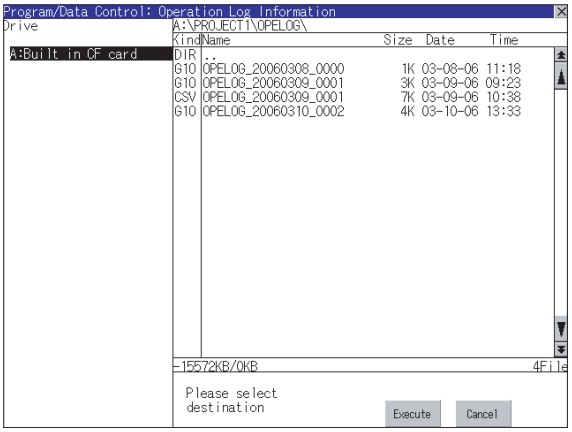
List ..... ☞ this section 8

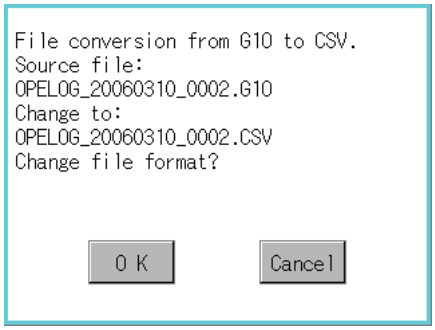
7 If touch ☒ button, the screen is closed.

2 Operation of G1O → CSV conversion G1O → TXT conversion

Operation log file (G1O file) is converted to CSV file or Unicode text file that can be displayed/edited on personal computer.







(Example: Dialog if the G1O->TXT button is touched.)

(Continued to next page)

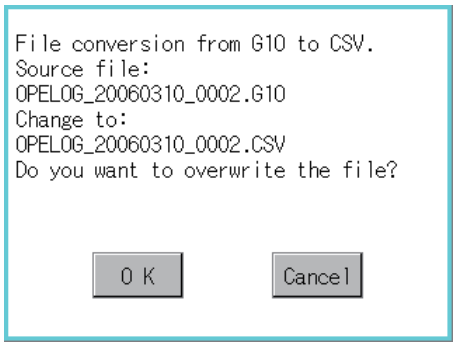
1 Touch and select the G1O file which is to be converted to CSV file or Unidcode text file.

2 Touch the following button in accordance with destination file type.

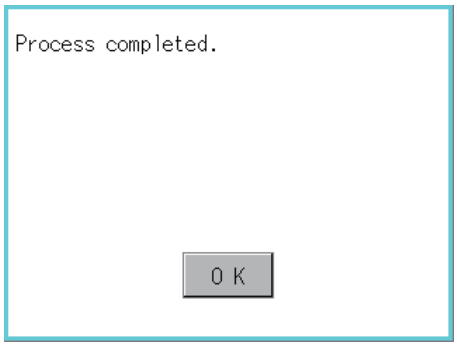
- CSV file : G1O->CSV button
- Unicode text file : G1O->TXT button

3 Select the target folder.
(Selecting a folder is not needed for outputting directly below the drive.)

4 If touch the Excute button, the dialog shown left is displayed.
Touch the OK button.
(While executing, "Processing..." message appears on the screen.)



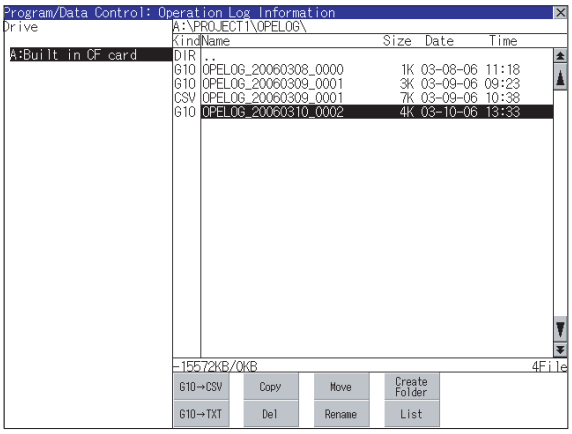
5 When the file, whose name is the same, exists in the destination folder, the dialog shown left appears without starting the conversion. If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels the conversion.



6 The message of completion is displayed in dialogue when conversion is completed.
If touch [OK] button, the dialog is closed.

3 Delete operation

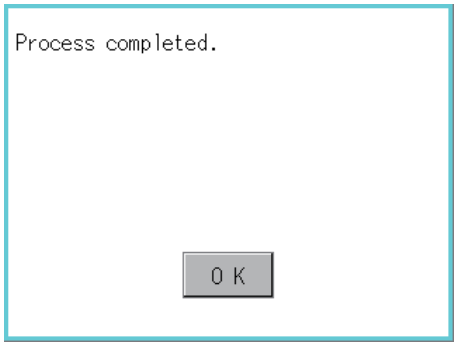
Folder and file to be used on operation log are deleted.



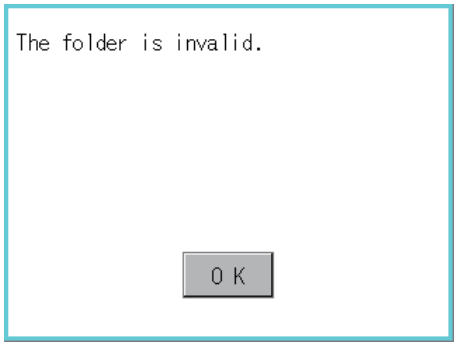
1 Touch and select the file/folder to delete.



2 If touch [Del] button, the dialog mentioned left is displayed.
If touch [OK] button, the file/folder is deleted.
(While executing, "Processing..." message appears on the screen.)
If touch [Cancel] button, the deletion is canceled.



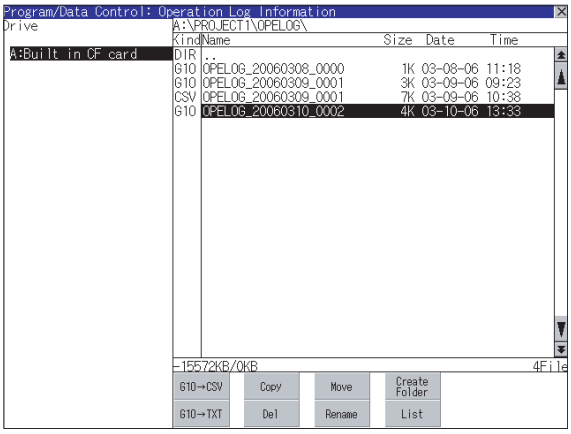
3 When the deletion is completed, the completion dialog is displayed.
If touch [OK] button, the dialog is closed.



4 When it cannot be deleted, the dialog showed at left appears. (Only when deleting folder is executed.)
Verify that there is no file in the folder and execute the delete operation again.
(☞13.11.5 Precautions)

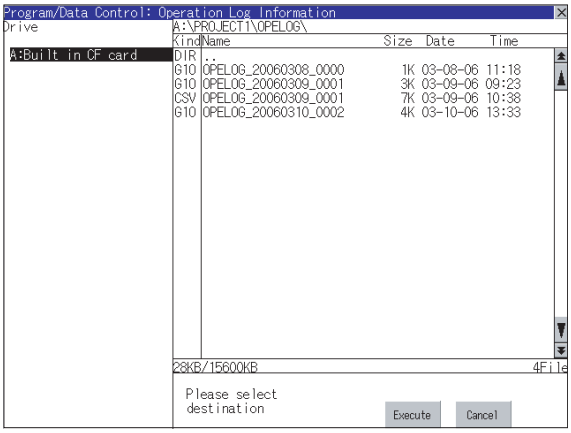
4 Copy operation

An operation log file is copied.

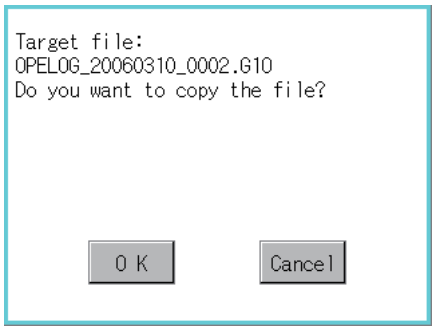


1 Touch and select the file to copy.

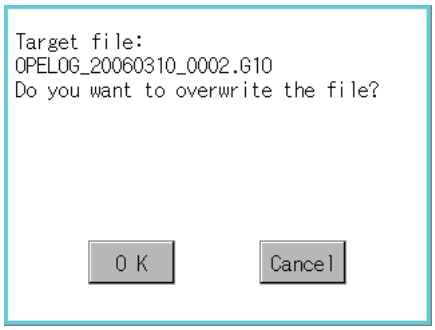
2 Touch the [Copy] button.



3 Select the target folder.
(Selecting a folder is not needed for outputting directly below the drive.)
At this time, it cannot be copied into the same folder where the file exists.
Select other folders.

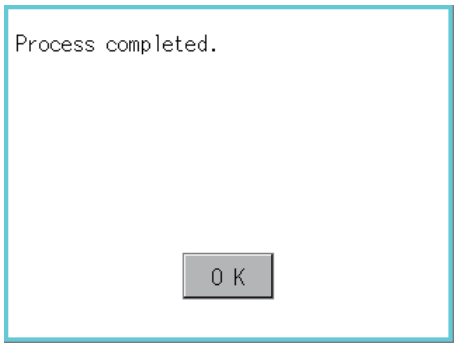


4 If touch [Excute] button, the following dialog shown left is displayed.
Touch [OK] button.
(While executing, "Processing..." message appears on the screen.)



5 If there is a file of the same name in the copy destination folder, the following dialog is displayed without starting the copy.
If touch the [OK] button, overwrites the file.
If touch [Cancel] button, cancels to copy.

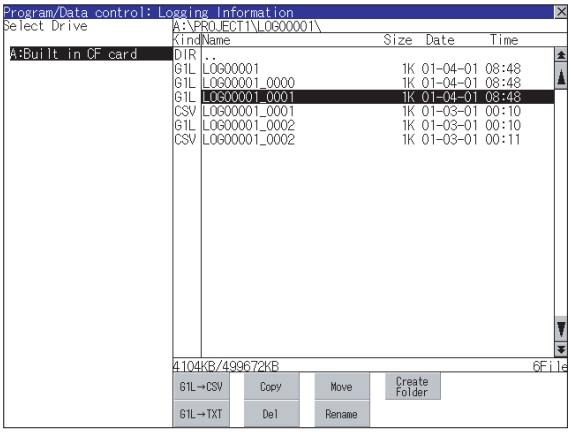
(Continued to next page)



6 When the copy is completed, the dialog of completion is displayed.
If touch [OK] button, closes the dialog.

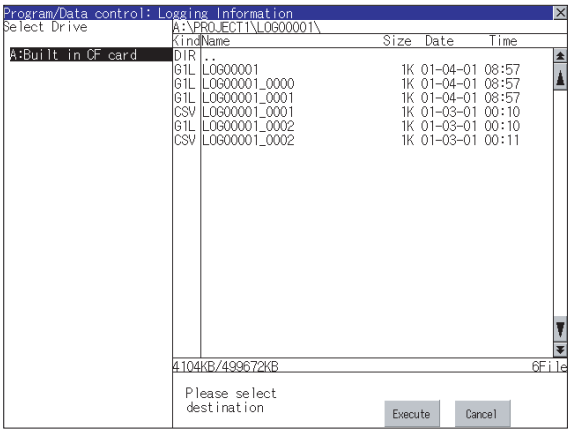
5 Move operation

An operation log file is moved.



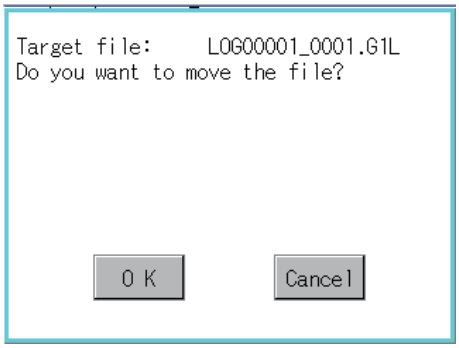
1 Select the file to be moved by touching it.

2 Touch the [Move] button.

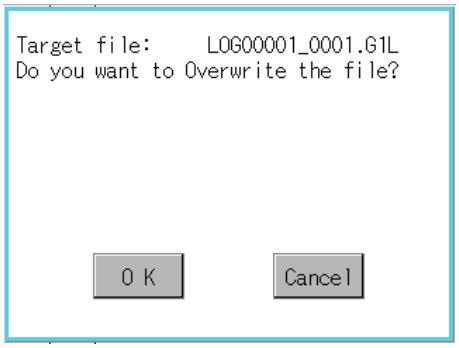


3 Select the target folder.
(Selecting a folder is not needed for moving directly below the drive.)

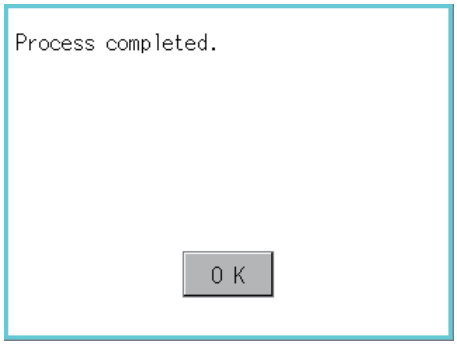
(Continued to next page)



4 If touch the Execute button, the dialog shown left is displayed.
Touch the OK button.
(While executing, "Processing..." message appears on the screen.)



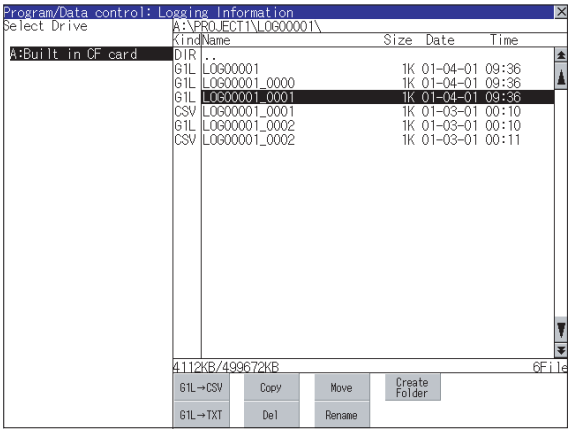
5 When only file with the same name exists in the destination folder, the dialog shown left appears without starting the movement.
Touching the OK button overwrites the file.
If touch the Cancel button, cancels moving.



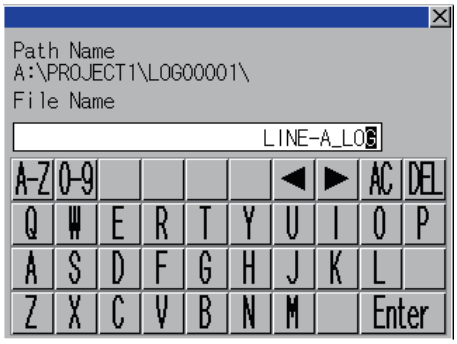
6 When moving is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.

6 Rename operation

An operation log file is changed.



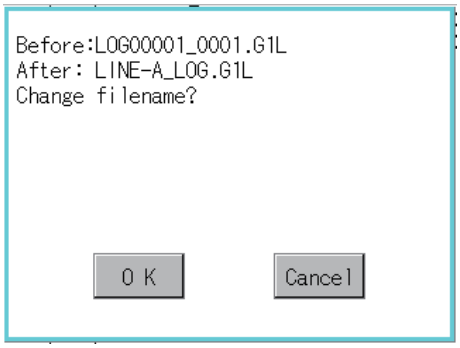
1 Select the file to be renamed by touching.



2 If touch the Rename button, displays the screen shown left, then input the file name to be renamed.
By touching the following button, input text type is changed.

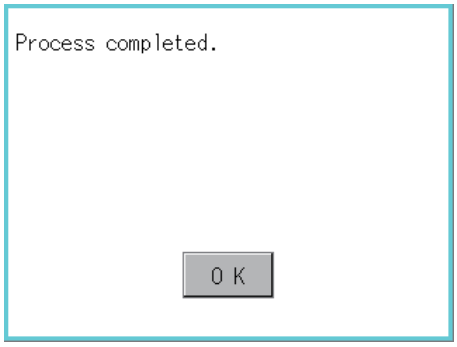
A-Z :English capital

0-9 :Numeric/Symbol



3 If touch the Enter button, displays the dialog shown left.

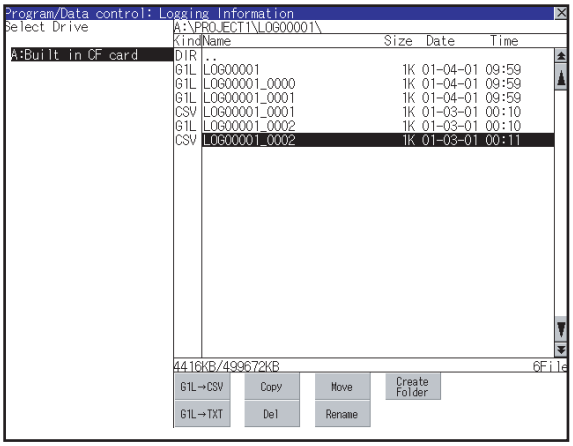
4 If touch the OK button, starts renaming file.
(While executing, "Processing..." message appears on the screen.)



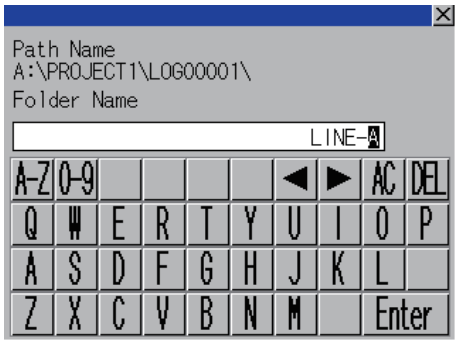
5 When renaming is completed, completion dialog is displayed.
If touch the OK button, closes the dialog.

7 Folder create operation

An operation log folder is created.



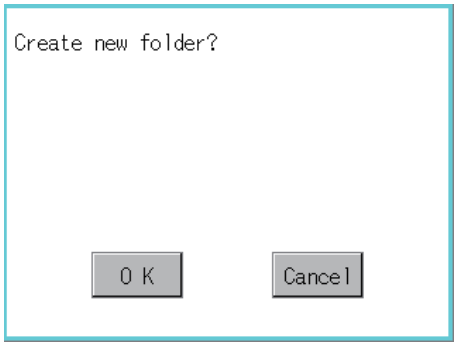
1 Touch the [Create Folder] button.



2 The input key window shown left appears, then input the file name to be created.
By touching the following button, input text type is changed.

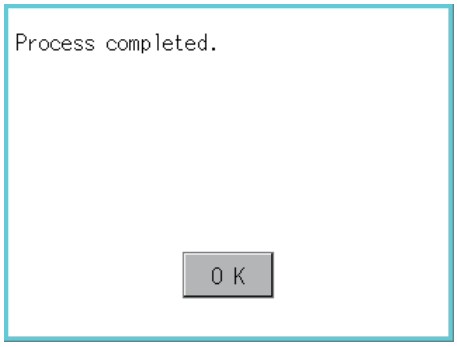
[A-Z] :English capital

[0-9] :Numeric/Symbol



3 If touch the [Enter] button, displays the dialog shown left.

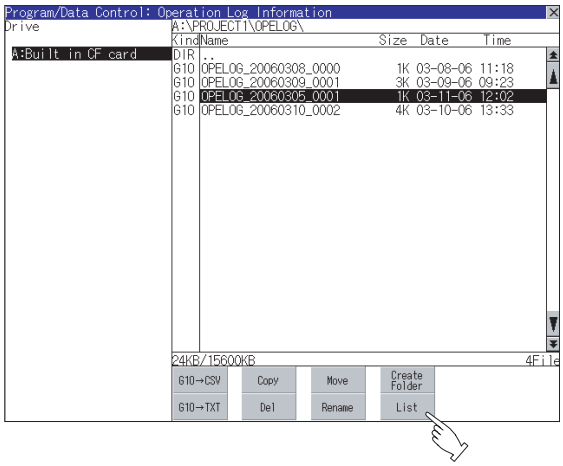
4 If touch the [OK] button, starts creating folder.



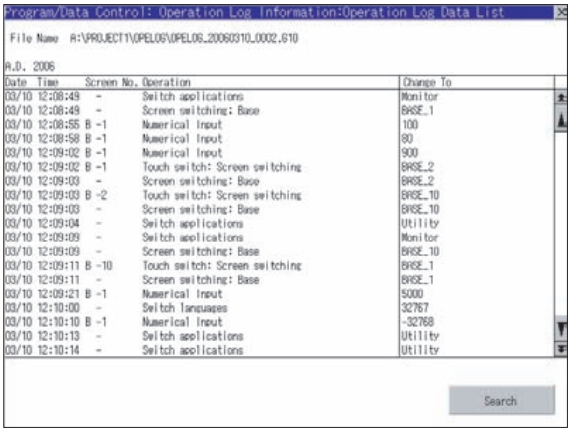
5 When creating folder is completed, completion dialog is displayed.
If touch the [OK] button, closes the dialog.

8 List display

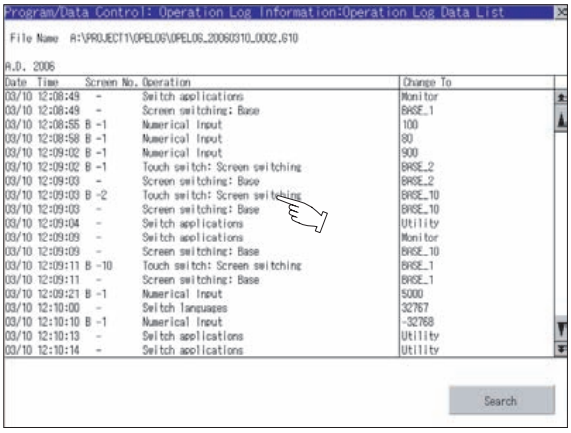
Displays operation logs in an operation log file in a list.



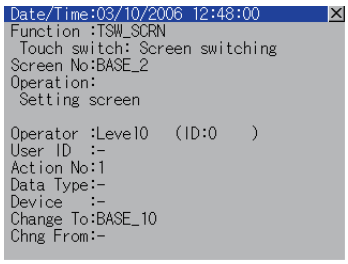
1 Touch and select a file for displaying the list.



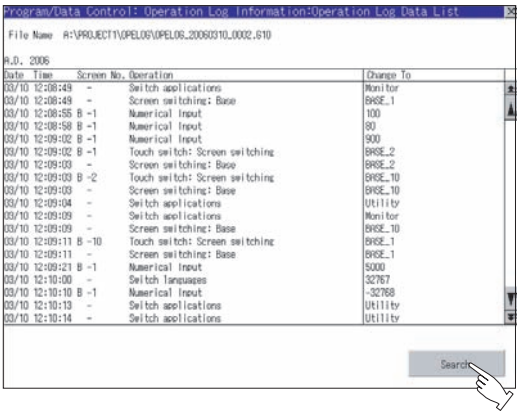
2 List Touching the List button displays the list.
In the list, the following contents can be checked.
Display items: Date
Time
Screen No.
Operation type
Value after change



3 To display the details of an operation log, touch the row for that operation log to select it. The color of the row is inverted (white → black).

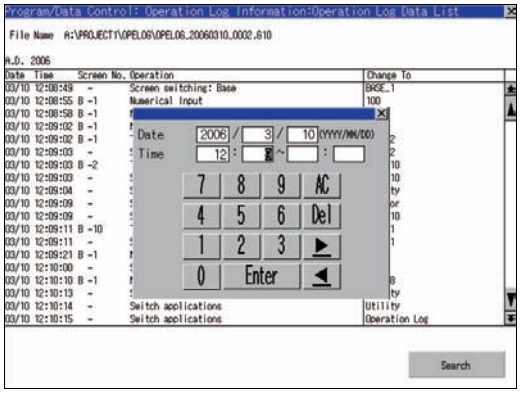


4 Touching the selected row again displays the detailed information for the operation log.
☒ Touch the xxxx button to close the dialog.

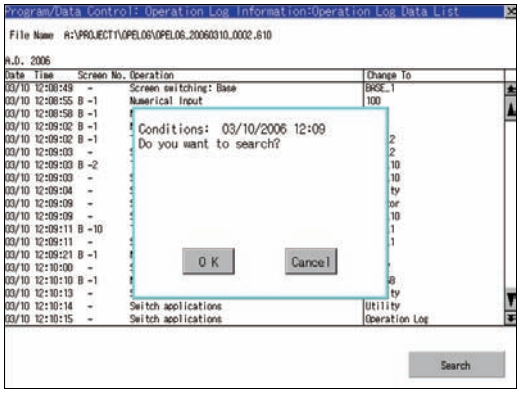


5 Touching Search in the list enables searching of a log using the following items.

Item: Date
Time



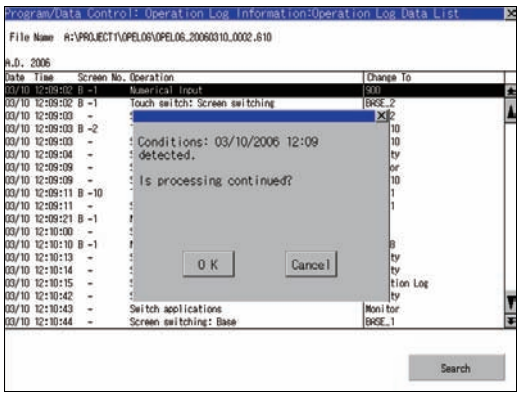
6 Input the date or time to be searched.



7 Touching the Enter button displays the dialog on the left.

OK Touch the OK button.

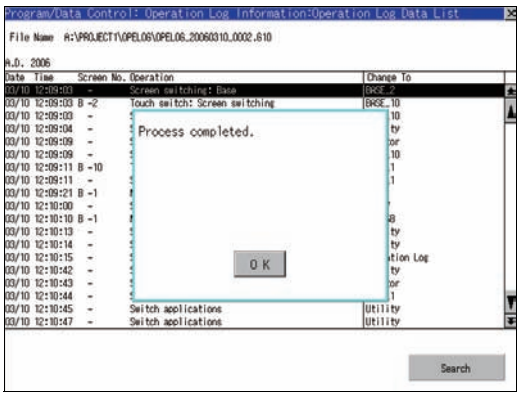
(When processing is being executed, the "Processing" message is displayed on the screen.)



8 The results found are displayed and the dialog on the left is displayed.

To continue a search, touch the OK button.

To stop a search, touch the Cancel button.



9 When searching is completed, a completion message is displayed in the dialog.

Touching the OK button closes the dialog.

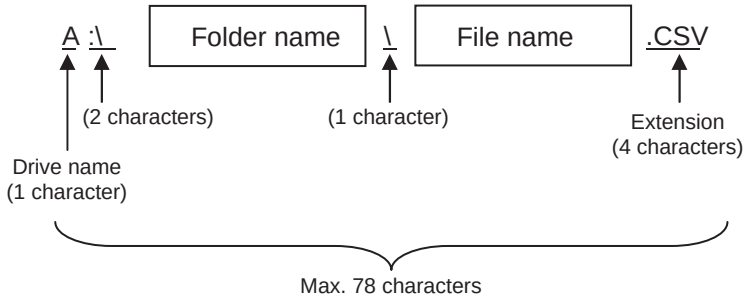
13.11.5 Precautions

1 Precautions for create/delete

(1) When creating folder/file

(a) Number of characters set for folder or file name.
GOT recognizes file location according to path explained below.
Specify folder or file name, and total characters of path cannot exceed 78 characters.
Users only can rename folder or file name.
(Other than folder/file name is automatically printed.)

Example, CSV file Path in memory card (for GT15)



Remark If folder is assigned the hierarchy.

The \ mark is displayed between folder name and folder name, folder name and file name.
The \ mark is also counted as one character.

(b) Character strings that cannot be set
The following character strings cannot be used as a folder name or a file name. Even small characters of those cannot be used.

- COM1 to COM9
- LPT1 to LPT9
- AUX
- CON
- NUL
- PRN
- CLOCK$

In addition, the folder/file name showed below cannot be used.

- The folder name which begins with G1.
- Folder name and file name which begin with . (period).
- Folder name and file name which finish with . (period).
- Folder name and file name which have only . (one period) or ..(two periods).

(2) For deleting the folder
The folder in which the file exists cannot be deleted.
Delete the folder after having deleted the files.
In addition, on the operation log information screen, the file other than that for operation log is not displayed on GOT. When the folder, in which there is no file displayed on the screen, cannot be deleted, confirm whether there is other file in memory card by using personal computer, etc.

2 Precautions for operation

(1) Precautions during folder/file operation (Create/Delete/Copy/File output, etc)

Even if CF card access switch has been turned OFF while GOT is processing folders and files, the processing continues to be executed.

(Example: Even if CF card access switch has been turned OFF while GOT is creating a folder, the folder is created.)

Therefore, do not pull out the CF card while the "Processing..." message is on the screen after CF card access switch has been turned OFF.

13.12 GOT Data Package Acquisition

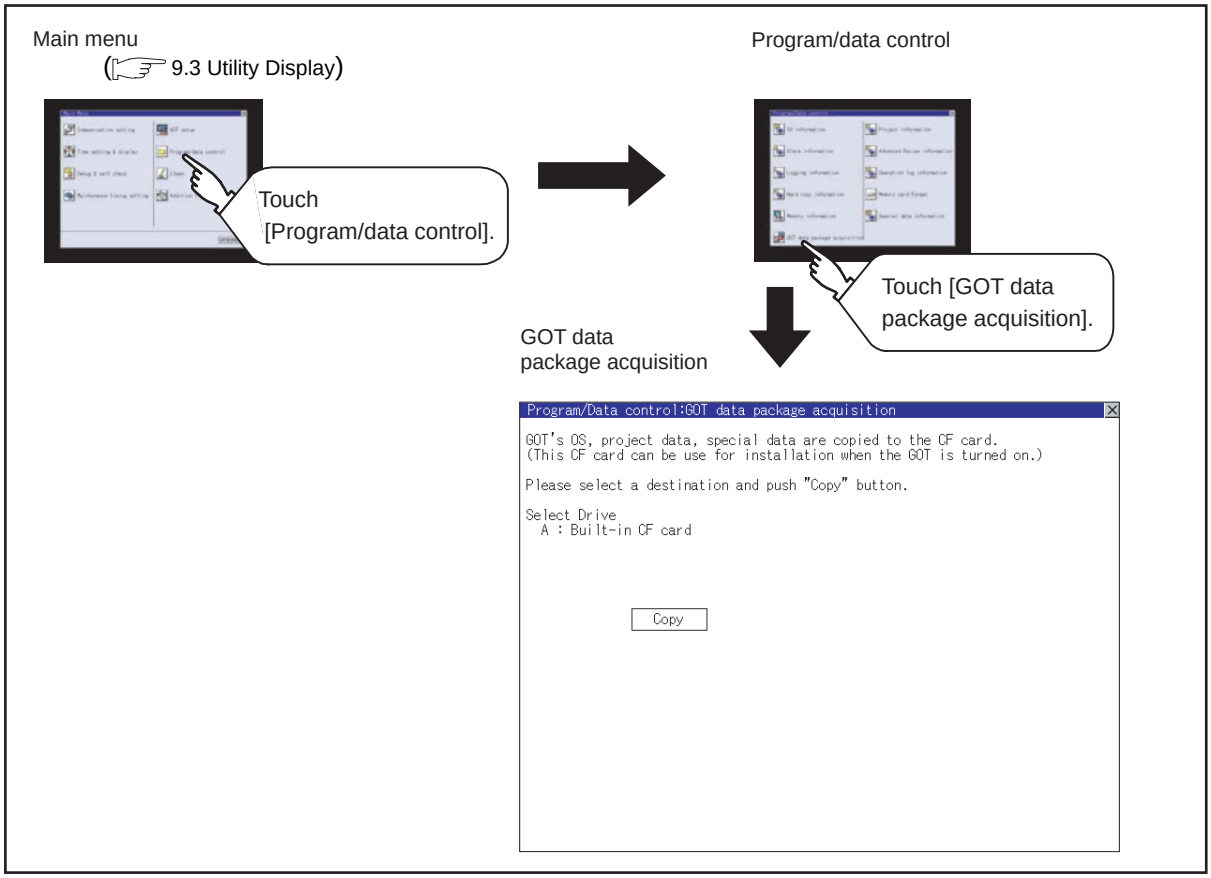
13.12.1 GOT data package acquisition function

The GOT data package acquisition copies the installed OS or data in the GOT main unit to the memory card
- OS (Boot OS, standard monitor OS, communication driver, extended function OS, option OS)
- Special data
- Project data

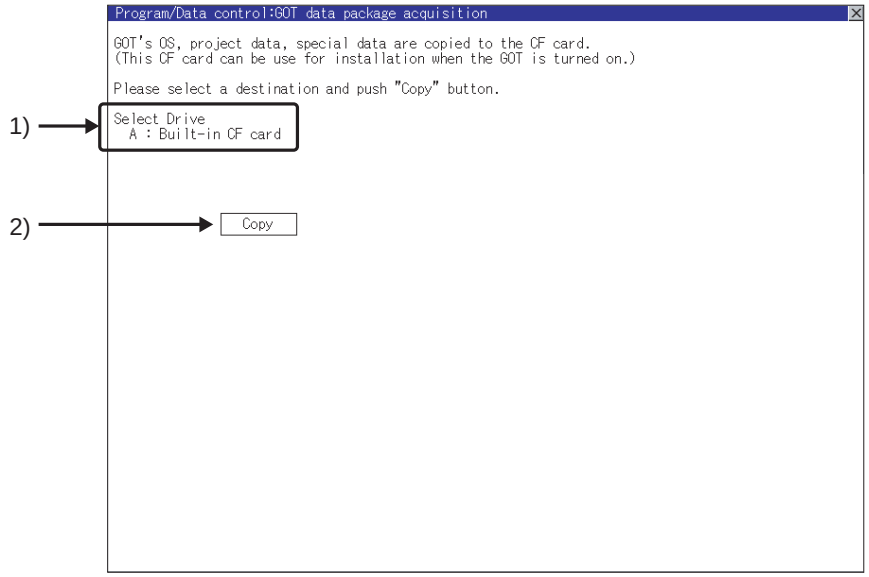
The copied data can be utilized for backup or creating the same GOT system by installing the data.
For installation function of the GOT, refer to the following.

☞ 18.3 BootOS and Standard Monitor OS Installation Using Memory Card

13.12.2 Display operation of GOT data package acquisition



13.12.3 Display example of GOT data package acquisition



No.	Item	Description
(1)	Select Drive	Displays the drive where OS and data can be copied. When the memory card is not installed, [A: Built-in CF card] and [B: Memory card] are not displayed.
(2)	Copy	Touching the button starts copying.

13.12.4 GOT data package acquisition operation

1 Display operation of GOT data package acquisition

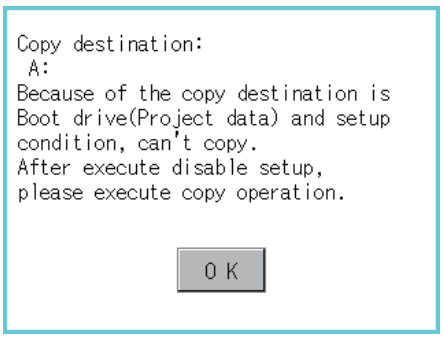
The GOT data package acquisition copies the installed OS or data in the GOT main unit to the memory card.
(This item explains using the A drive.)



1 Touching the drive name below [Select Drive] inverts the touched drive name.

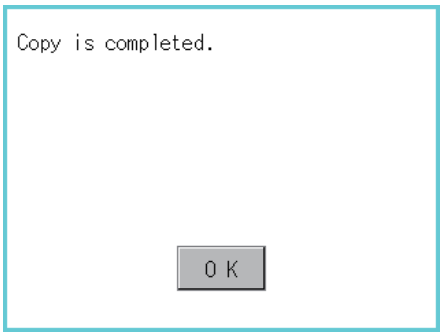
Touching the Copy button starts copying.

(Example: Dialog box after touching the Copy button)



2 The display depends on the status of copy destination and setup.

Operate with following the displayed dialog box.



3 After copying OS and data, the dialog box for notifying the completion appears.
Touching the OK button closes the dialog box.

Remark Processing time reference

The time required for the processing depends on conditions such as OS, data capacity, and file structure.
(Reference values)

- When the capacity is 4 Mbytes: Around 6 seconds
- When the capacity is 12 Mbytes: Around 18 seconds

2 Precautions for operation

(1) Copying project data
If the Boot source drive and copy destination drive for project data is the same, the project data cannot be copied.
If the drives are the same, cancel the setup.

(2) When project data are copied to the GOT
If OS or project data is copied to the GOT using the memory card created with GOT data package acquisition, the utility setting is also copied.
Check each utility setting after copying to the GOT and change the setting according to need.

(3) Memory card to be used
When performing GOT data package acquisition, do not store other data to the memory card.
If doing so, the previous data will be unavailable.

14. GOT SELF CHECK (DEBUG & SELF CHECK)

The GOT can display the screen for debugging or self-checking.
The following describes the functions available as the debugging and self checking function.

Item	Description	Reference page
Debug	System monitor, Ladder monitor, A list editor, List editor for MELSEC-A, intelligent module monitor, Network monitor, Q motion monitor, servo amplifier monitor, CNC monitor, Backup/restoration, and CNC data I/O, SFC monitor	14-1
Self check	Memory check, Drawing check, Font check, Touch panel check, I/O check, NETWK unit status display	14-3
System alarm display	GOT errors, CPU errors, network errors	14-32
GOT start time	Time when the GOT was started	14-34
Operator info. Management	Operator management, Password change, Function setting	14-36

14.1 Debug

In this manual, the overview of the debuggingfunction and the operation procedure until displaying the screen are described.
For display contents and operation procedure of debuggings, refer to the following manual.

☞ GOT1000 Series Extended/Option Functions Manual

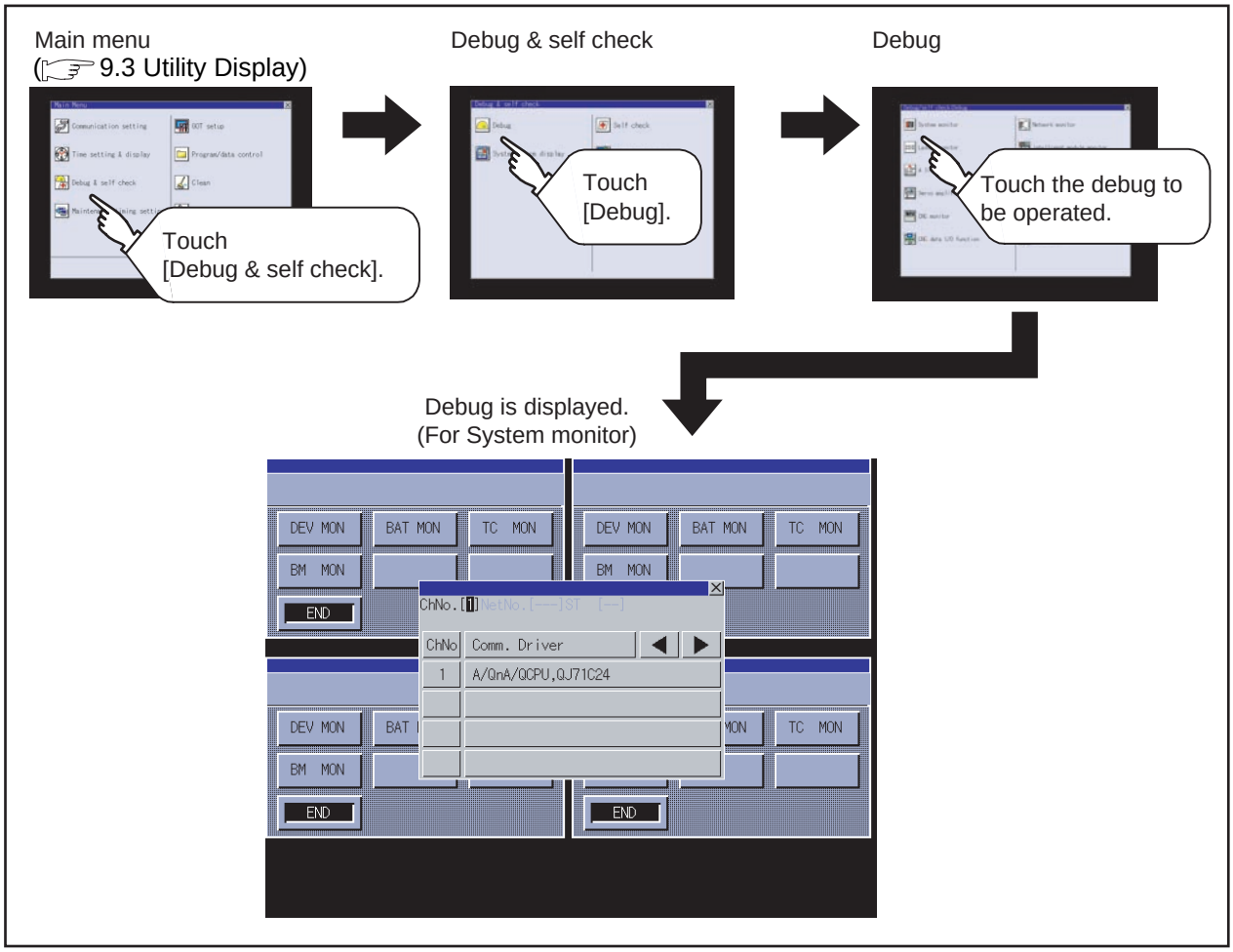
14.1.1 The Debug function

The Debug function is designed to confirm the device status of PLC CPU and to make the response for PLC system trouble more efficient.
The following shows the functions that can be performed with the Debug function.

Item	Description
System monitor	The device of PLC CPU and buffer memory of intelligent function module can be monitored or tested.
Ladder monitor	The program of PLC CPU can be monitored in ladder format.
A list editor	The sequence program of ACPU can be list edited.
FX list editor	The sequence program of FXCPU can be list edited.
Intelligent unit monitor	Buffer memory in the intelligent function module can be monitored or the data can be changed on the dedicated screen. And the signal status of I/O modules can be monitored.
Network monitor	The network status of the MELSECNET/H, MELSECNET/10, MELSECNET(II), and CC-Link IE controller network can be monitored.
Motion monitor	The servo monitoring and parameter settings of the motion controller CPU (Q series) are available.
Servo amplifier monitor	Various monitor functions, parameter change, test operation, etc. of the servo amplifier are available.
CNC monitor	Functions equivalent to the MELDAS dedicated display, such as Position Display Monitor, Alarm Diagnosis Monitor, Tool Offset/Param, and Program Monitor, are available.

Item	Description
Backup/restoration	Executing backups, executing restorations, and deleting backup data are possible.
CNC Data I/O	Machining programs, parameters, and others of the CNC connected to the GOT can be copied or deleted.
SFC Monitor	The GOT can monitor and display SFC programs of the PLC CPU in the SFC diagram format (MELSAP3 or MELSAP-L format).

14.1.2 Display operation of Debug



14.2 Self check

14.2.1 Self check function

Carries out self-check of screen data or memory etc. The items which can be self-checked are as follows.

Items	Description	Reference page
Memory check	Carries out write/read check of the memory card and built-in flash memory [Password] 5 9 2 0	14-4
Drawing Check	Carries out missing bit check, color check and drawing check.	14-7
Font check	Displays the character data on the screen to check visually.	14-12
Touch panel Check	Checks whether there are no dead zone area in the Touch key minimum unit (16 dots x 16 dots).	14-14
I/O check	Carries out RS-232 connecting target confirmation and self-loopback check.	14-16
NETWK unit status display	Displays the LED status, error information, etc. of the installed MELSECNET/H communication unit or CC-Link communication unit (GT15-J61BT13).	14-32

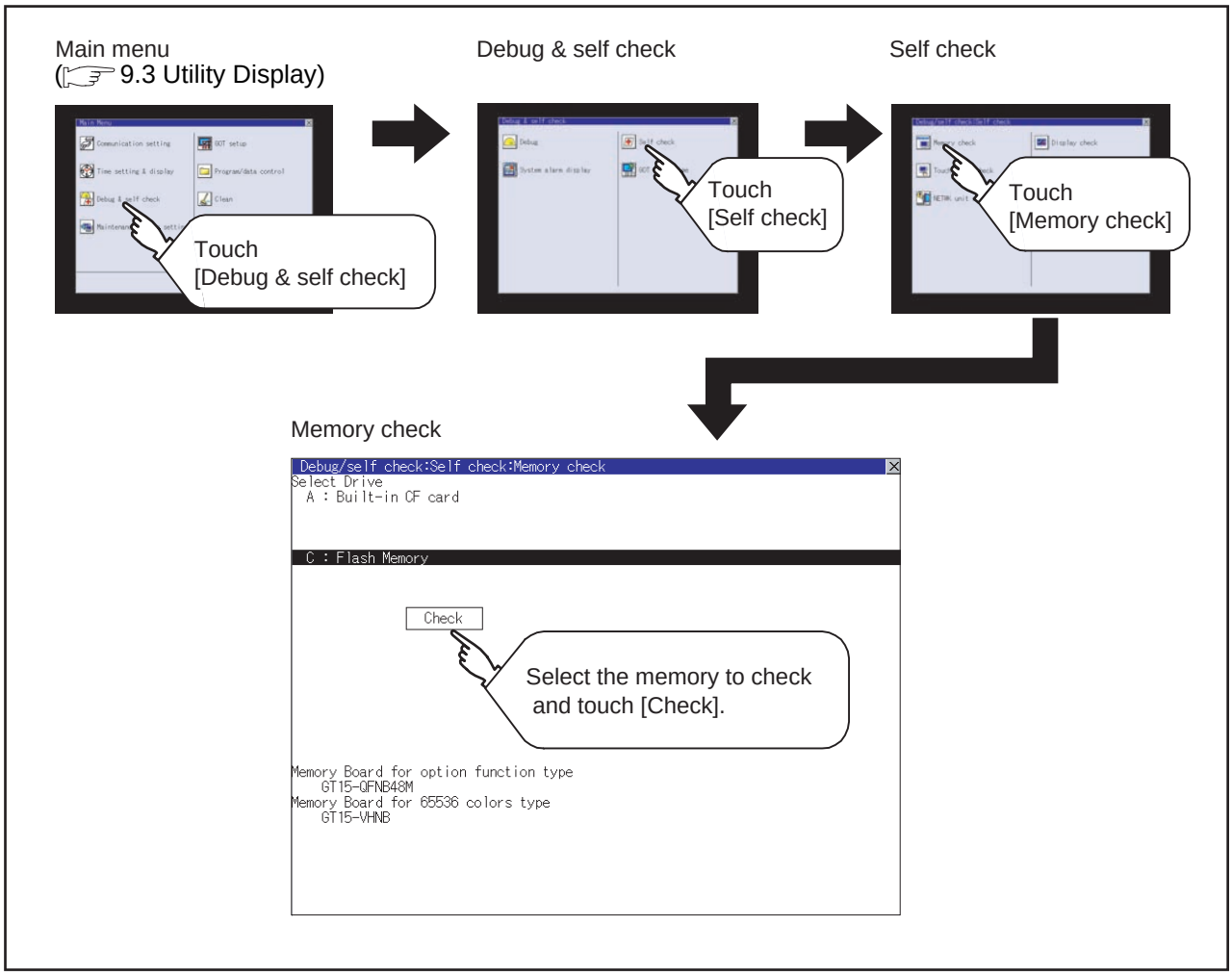
14.3 Memory Check

14.3.1 Memory check function

Memory check function carries out the write/read check of A drive (Standard CF Card), B drive (Extended memory card), and C drive (Built-in flash memory).

Function	Description
A drive memory check	Checks whether the memory (CF card) of the A drive can be read/written normally.
B drive memory check	Checks whether the memory (Extended memory card) of the B drive can be read/written normally.
C drive memory check	Checks whether the memory (Built-in flash memory) of the C drive can be read/written normally.

14.3.2 Display operation of memory check



Remark Mounting condition of optional devices (board)

The mounting status of option function board and multi-color display board is displayed on the lower left of the memory check screen.

When mounted : The model numbers of the mounted option function board and multi-color display board are displayed.

When not mounted : "None" is displayed.Memory check operation

Carries out write/read check of memory.

Point When drive is not displayed

When the drive (memory) to check is not displayed, confirm the mounting procedure or memory type with reference to the following.

- CF card inserting/removing method (☞ 8.8 CF Card)

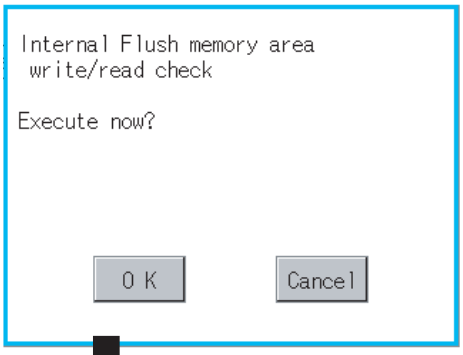
When no faults are found in mounting, etc, a memory failure may be arosen.
Replace the memory card or built-in flash memory (C drive).
For details of built-in flash memory, contact your local Mitsubishi (Electric System) Service.

The following example explains about Memory Check using built-in flash memory (C drive).
For the Bulit-in CF card (A drive) memory check or Extended memory card (B drive) memory check, install the CF card before carrying out the same key operations as built-in flash memory.

1 Select [Flash Memory] in the Memory check setting screen.

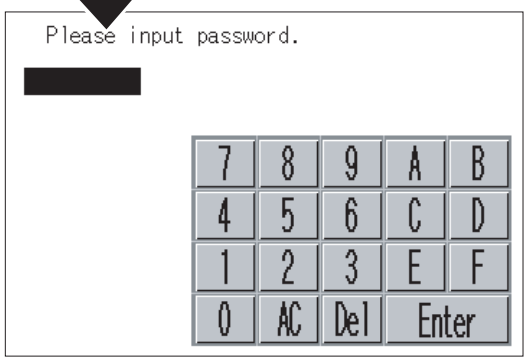
If select [OK] button, the numeric keyboard window is displayed.

If select [Cancel] button, returns to the initial menu.



2 Touch to input password ([5][9][2][0]) and touch [Enter].

If touch [Enter],executes read/write check for the built-in flash memory, which is completed in around 10 seconds.

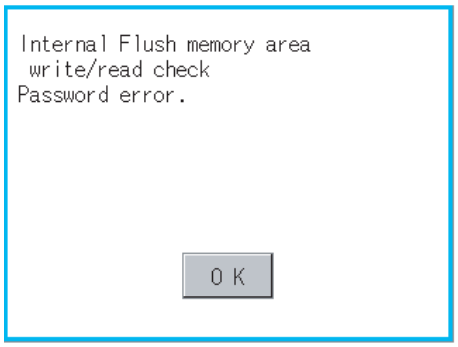


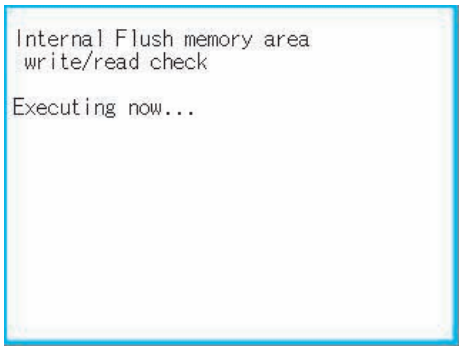
Remark

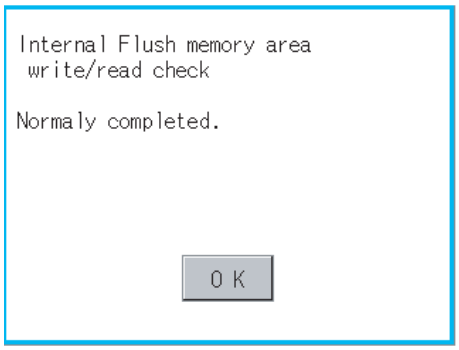
Password change

The password cannot be changed.
When input password error, the cancel dialog is displayed.

If touch [OK], returns to the Memory check screen.





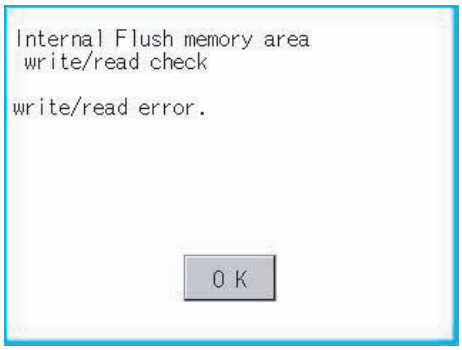


Point

When error is found in memory

When error is found by memory check, the dialog indicating the area in which the error occurred is displayed.
In case of error, contact your local Mitsubishi (Electric System) Service.

If touch [OK], returns to the Memory check screen.

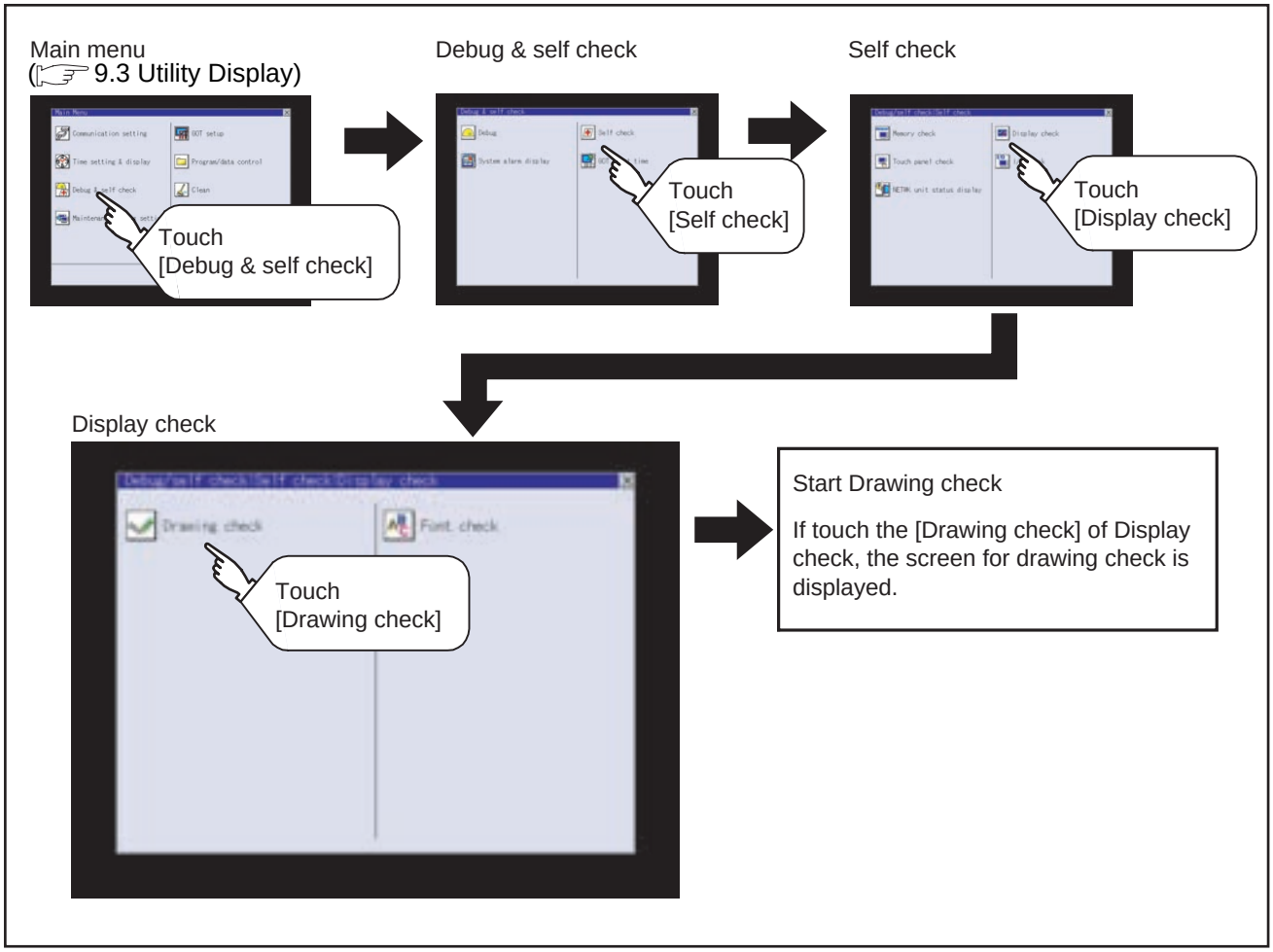


14.4 Drawing Check

14.4.1 Drawing check function

The drawing check function carries out display checks as missing bit check, color check, basic figure display check, move check among screens.

14.4.2 Display operation of drawing check



Point

Notes on drawing check

Missing bits is occurred in the following cases.

1. There are parts drawn in different color with the filled color.
2. There are parts of basic figure and drawing patterns which are not drawn according to the layout and procedures described in "Section 13.3.3 Display and Operation of Drawing Check".

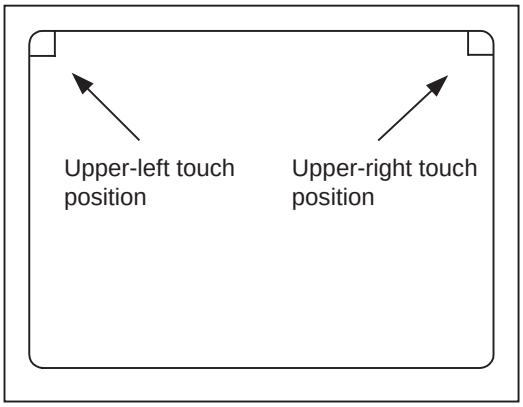
When missing bits occurs, contact your local Mitsubishi (Electric System) Service.

14.4.3 Drawing check operation

The screen for drawing check can be displayed by touching [Drawing check] on the Display check menu.

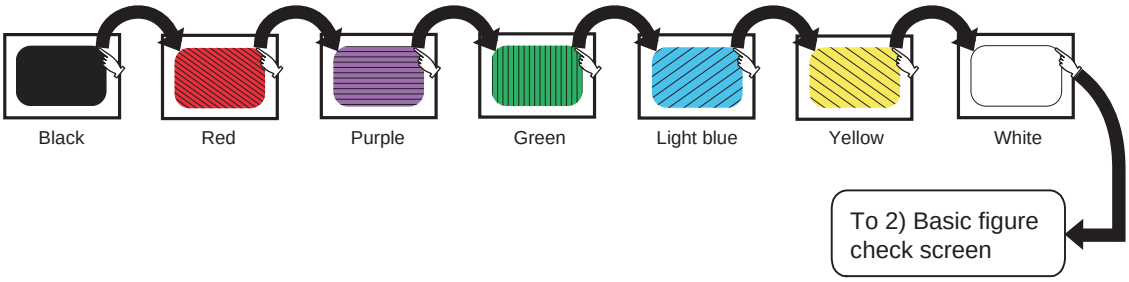
1 Before execute drawing check

Touching the upper right part of the screen proceeds to the next check in each step during drawing check.
Touching the upper left part of the screen returns to the [Display check] screen.



1 Missing bit, Color Check

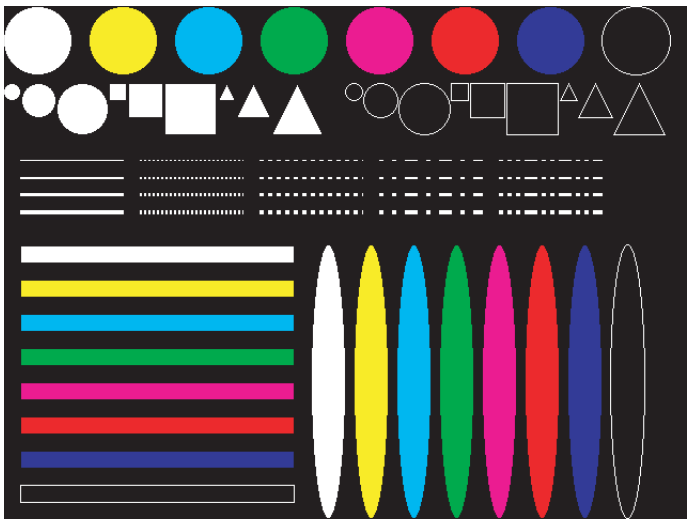
By touching the upper-right part of the screen, the entire screen color changes in the following order:
black → red → purple → green → light blue → yellow → white.
Check missing bit and color visually.



If touch the upper right part of the screen at the final color (white screen), the following 2) Basic figure check screen is displayed.

2 Basic figure check

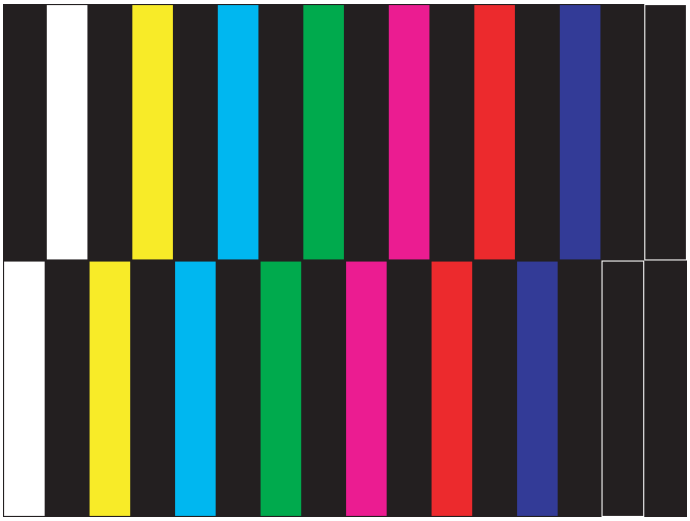
Check whether there is no shape transformation of basic figure or display losses.
The basic figure drawn has 4 types: 1. Filled circle, 2. Line, 3. Rectangle, 4. Ellipse.



To (a) Pattern 1of (3) Move check among screens

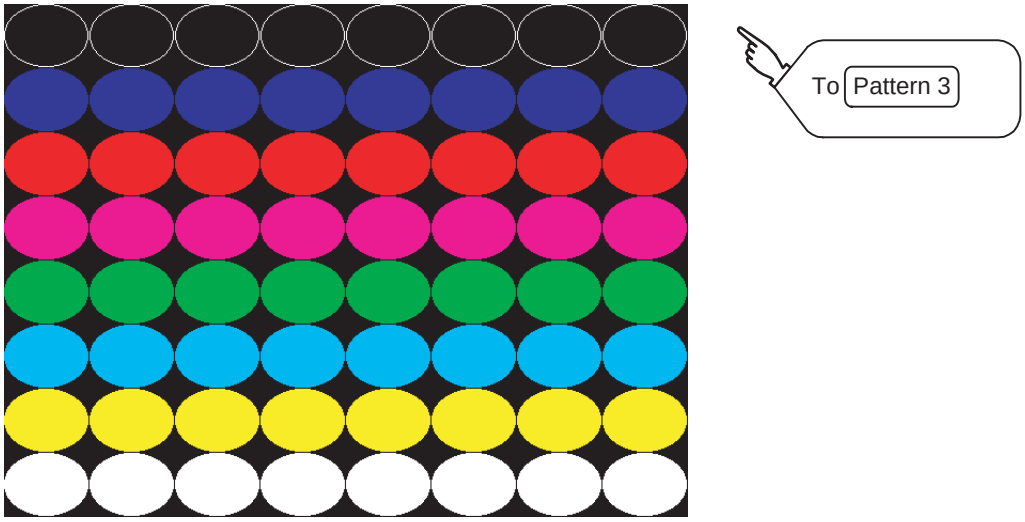
3 Move check among screens

(a) Pattern 1: Shape transformation, color check
The drawn figures are displayed in order and at regular intervals.
If the shape and color are displayed visually in order, it is normal.



Pattern 1

(b) Pattern 2: Shape transformation, color check
The drawn figures are displayed in order and at regular intervals.
If the shape and color are displayed visually in order, it is normal.

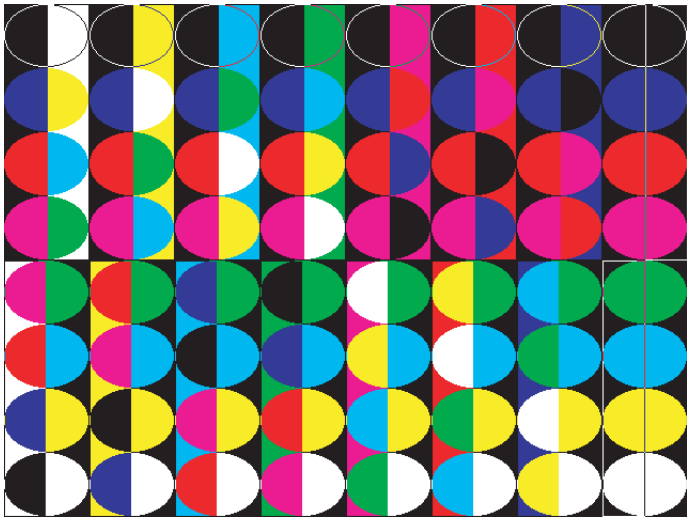


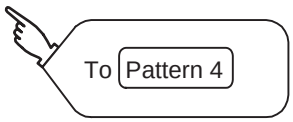
Pattern 2

(c) Pattern 3: Shape transformation, color check

The overlaped shapes of pattern 1 and pattern 2 are displayed.

If the shape and color are displayed visually in order, it is normal.



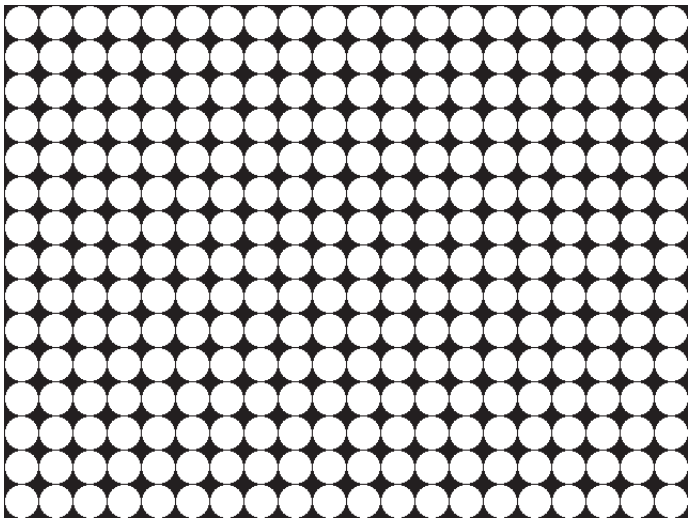


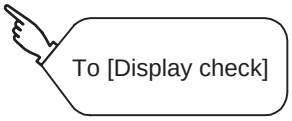
(d) Pattern 4: Shape Check

The drawn figures are displayed in order and at regular intervals.

If the shape and color are displayed visually in order, it is normal.

If touch the upper right part of the screen, returns to [Display check] screen.





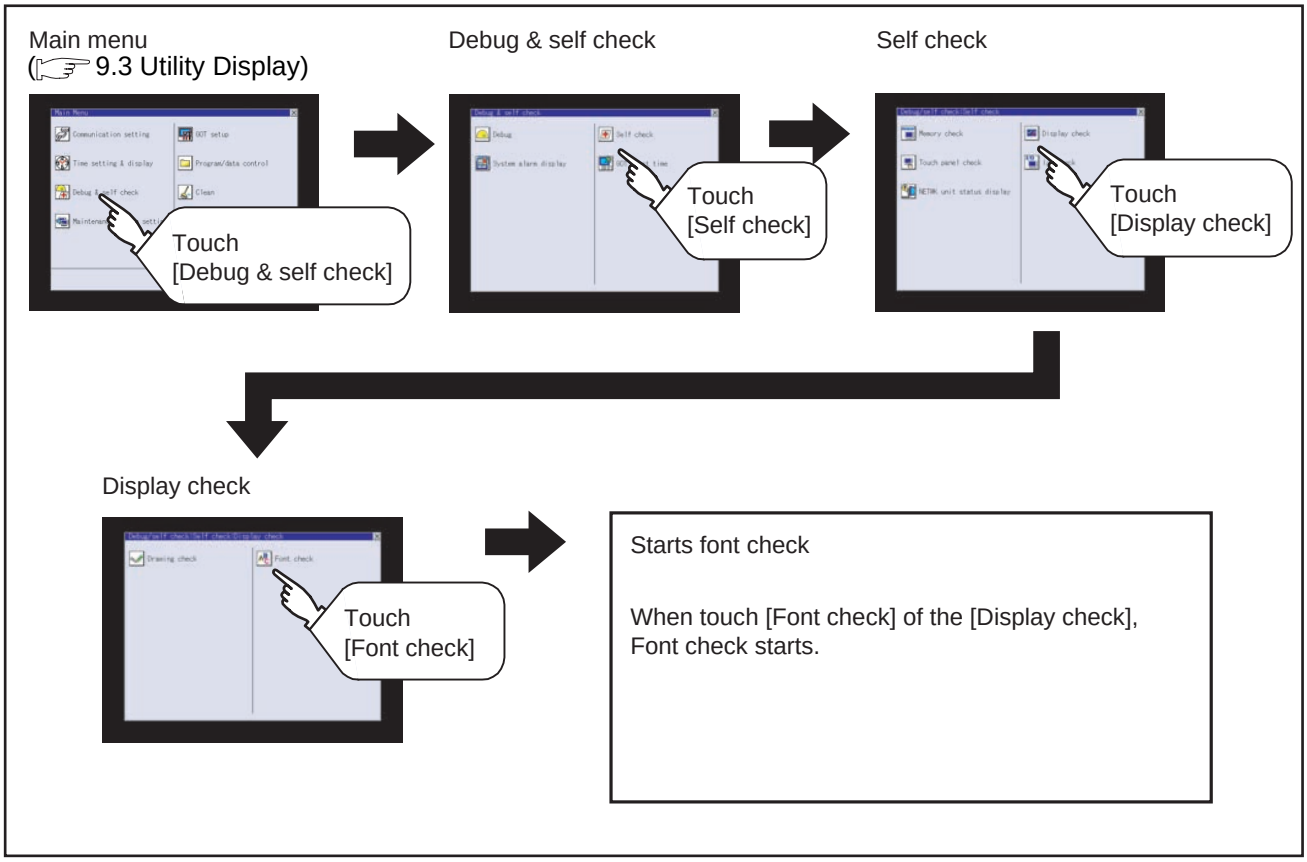
The main screen image after the screen information read and write is executed

14.5 Font Check

14.5.1 Font check function

The font check is a function which confirms fonts installed in GOT. The character data of the font is displayed on the upper left part of the screen one by one.

14.5.2 Display operation of Font check



Point

Notes on Font Check

Judged as normal if the following characters are correctly displayed. (UNICODE)

Alphabetic characters etc.	: 0 x 0000 to 0 x 04F9 (From basic Latin to Kirill)
Hangul characters	: 0 x AC00 to 0 x D7A3 (Hangul / Hangul auxiliary)
Kanji	: 0 x 4E00 to 0 x 9FA5 (CJK integrated Kanjis)

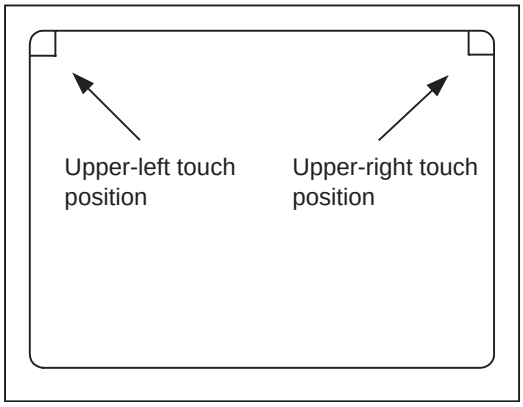
If the characters above are not displayed correctly, the fonts may not be installed.
Install the standard monitor OS again.

14.5.3 Font check operation

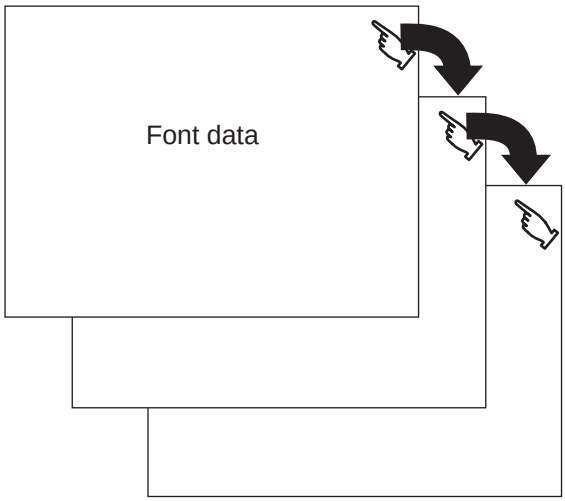
Font check starts by touching [Font Check] in the [Display check] screen.
The character data of the built-in font (in the built-in flash memory) can be checked visually to confirm the font drawings by displaying the character data serially on the screen.

1 Before execute font check

Touching the upper right part of the screen proceeds to the next check in each step during Font check.
Touching the upper left part of the screen returns to the [Display check] screen.



The installed font data is displayed by touching the upper right part of the screen.



Point

Option fonts

To display optional fonts, the followings are required.

- The option font installation
- Option function board installation

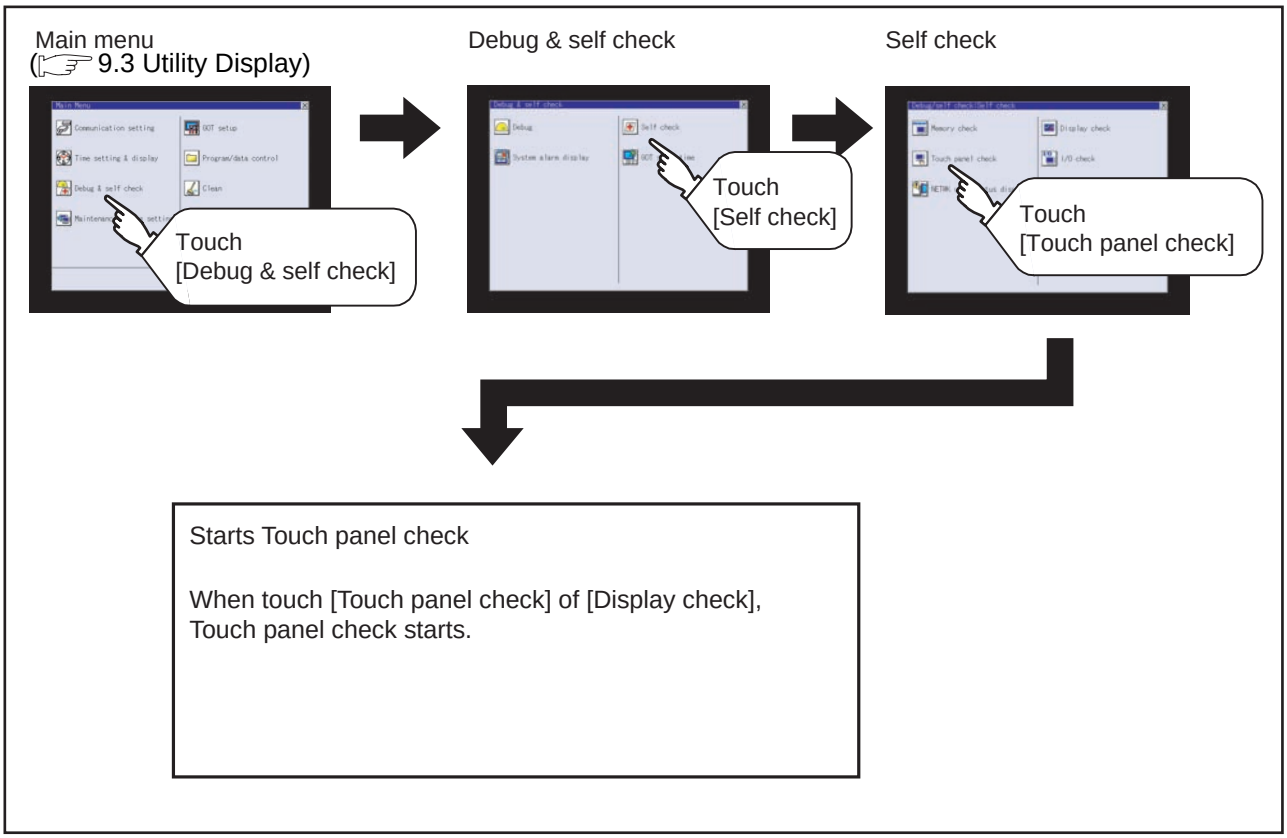
The option fonts are displayed at the end.

14.6 Touch Panel Check

14.6.1 Touch panel check function

Touch panel check is a function which checks whether there is no dead zone area in touch key minimum unit (16 dots x 16 dots).

14.6.2 Display operation of Touch panel check



Point

Notes on Touch panel check

If the touched part is not filled with yellow color, there are the following two possible causes.

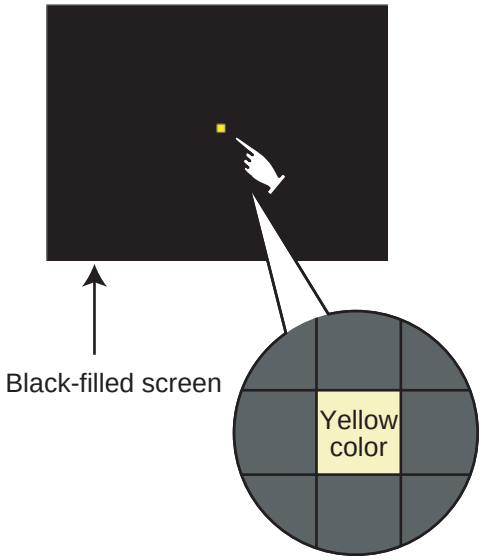
1. Display part failure
2. Touch panel failure

In that case, contact your local Mitsubishi (Electric System) Service.

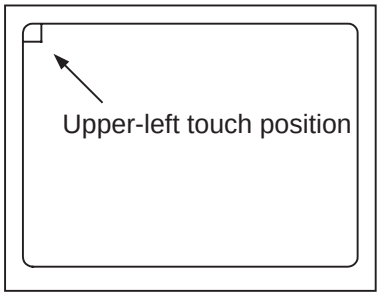
14.6.3 Touch panel check operations

If touch [Touch panel check] of self-check, a black-filled screen is displayed over the entire screen area.

1. Touch a part of the screen.
   The touched part becomes a yellow-filled display.



2. If touch the upper left part, returns to the self-check.



Remark Checking the upper left part of the screen

Only the upper left part of the screen cannot be filled with yellow.
If returnes to the self-check by touching the upper left part, judge that the upper left area operates normally.

14.7 I/O Check

14.7.1 I/O check function

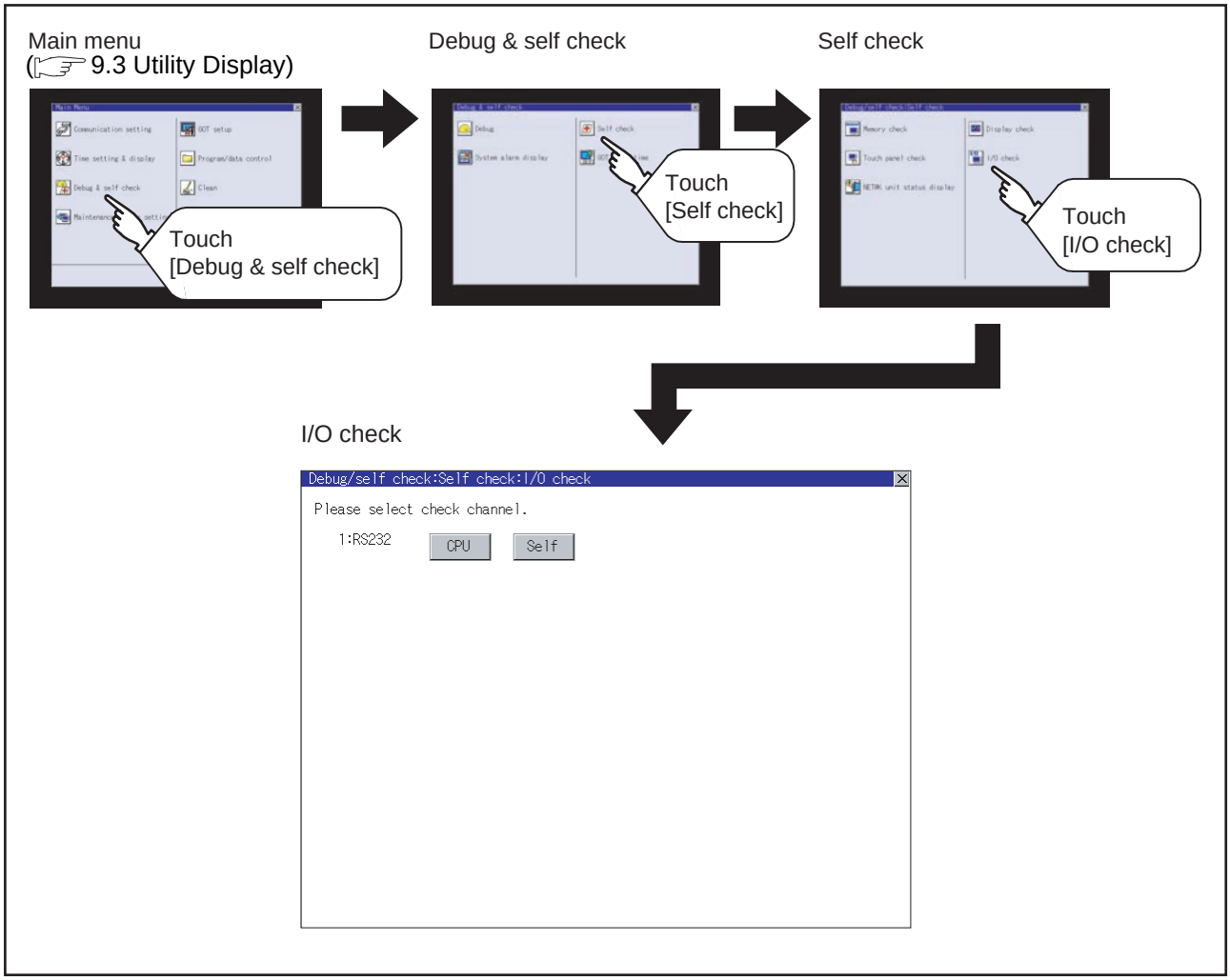
The I/O check is a function which checks whether GOT and PLC can communicate with each other.
If I/O check ends normally, the communication interface and the connection cable hardwares are normal.
To execute I/O check, the communication driver has to be installed in GOT in advance from GT Designer2.
Refer to the following for the details related to the installation of the communication driver.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(8. TRANSFERRING DATA)

(1) Communication drivers inapplicable to I/O check
When the following communication drivers are used, the I/O check cannot be executed.

Connection type		Communication driver
Connection to MITSUBISHI PLC	MELSECNET/H connection	MELSECNET/H
	MELSECNET/10 connection	MELSECNET/H, MELSECNET/10
	CC-Link IE controller network connection	CC-Link IE controller network
	CC-Link connection (Intelligent device station)	CC-Link(ID), CC-Link Ver.2(ID)
	Ethernet connection	QJ71E71/AJ71(Q)E71, Q17nNC, CRnD-700
Connection to YASKAWA PLC		YASKAWA GL/CP9200(SH/H)/CP9300MS, Ethernet (YASKAWA)
Connection to YOKOGAWA PLC		YOKOGAWA FA500/FA-M3/STARDOM, Ethernet (YOKOGAWA)
Connection to ALLEN-BRADLEY PLC		EtherNet/IP(AB)
Connection to SIEMENS PLC		SIEMENS S7-200, SIEMENS S7-300/400
Microcomputer connection		Computer
Inverter connection		FREQROL 500/700

14.7.2 Display operation of I/O Check



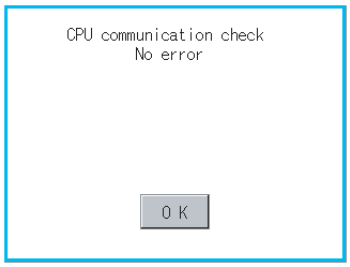
1 Connecting target confirmation

If touch [CPU] button, the connecting target confirmation communication check is carried out.

1 After the CPU communication starts normally, the dialog mentioned right notifying that it is on checking, untill the connecting target confirmation communication ends normally.



2 When the connecting target confirmation communication ends, its result is notified by dialog.
If the connecting target confirmation communication ends normally, the dialog notifying of the normal termination mentioned right is displayed. If touch OK button after confirming the result, returns to [I/O check].



If the dialog mentioned right is displayed after selecting connecting target confirmation or during CPU communication check, confirm the following.



- No misconnection with CPU
  (☞ GOT1000 Series Connection Manual
  (3.3.6 Verifying GOT recognizes controllers))
- No missettings of parameter
  (☞ 10.2 Communication Detail Settings)
- No hardware error.
  (☞ 20. TROUBLESHOOTING)

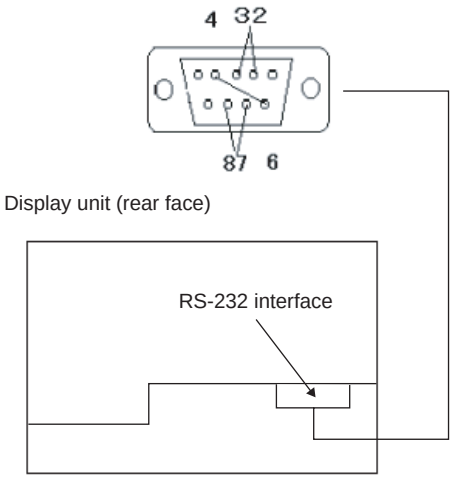
If touch OK button in the dialog After confirming the result, returns to [I/O check].

2 Self-loopback

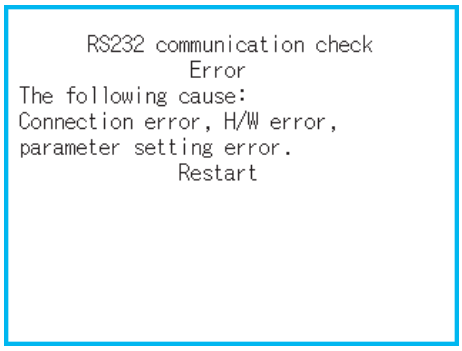
If touch [Self], the hardware check of RS-232 interface is carried out.

1 For preparation for the self-loopback communication check, insert the connector for self-loopback check (Customer purchased) shown in the diagram right in the RS-232 interface.
For this connector, short 2 and 3 pins, 7 and 8 pins and 4 and 6 pins, respectively.

In the communication setting of the GOT utility, set the channel number for the RS-232 interface to 0 ([None]).



2 After selecting [Self], the transferred data and received data are verified through the self-loopback connector. When the GOT cannot receive the data during the data transmission, the dialog shown right appears and the GOT restarts in five seconds.
When the dialog shown right appears, check the following.
• Check if the pins of the connector for self-loopback check are incorrectly shorted.
• Check if the channel number for the RS-232 interface is set to 0 ([None]) in the communication setting of the GOT utility.
(☞ 10.2 Communication Detail Settings)
• Check if the hardware has no problems.
(☞ 20. TROUBLESHOOTING)



3 During check, the dialog shown right is displayed.



4 When the all checks ended normally, the dialog shown right is displayed. And the GOT restarts in five seconds.



5 When an error occurs, the dialog that shows the GOT abnormal termination and the byte with the error appears, and then the GOT restarts in five seconds.
When the dialog shown right appears, check the following.
• Check if the hardware has no problems.
(☞ 20. TROUBLESHOOTING)



14.8 NETWK Unit Status Display

14.8.1 Functions of the NETWK unit status display

The network unit status display is a function that uses the communication units below to monitor the network status.

- MELSECNET/H communication unit (GT15-J71LP23-25, GT15-J71BR13)
- CC-Link IE controller network communication unit (GT15-J71GP23-SX)
- CC-Link communication unit (GT15-J61BT13)

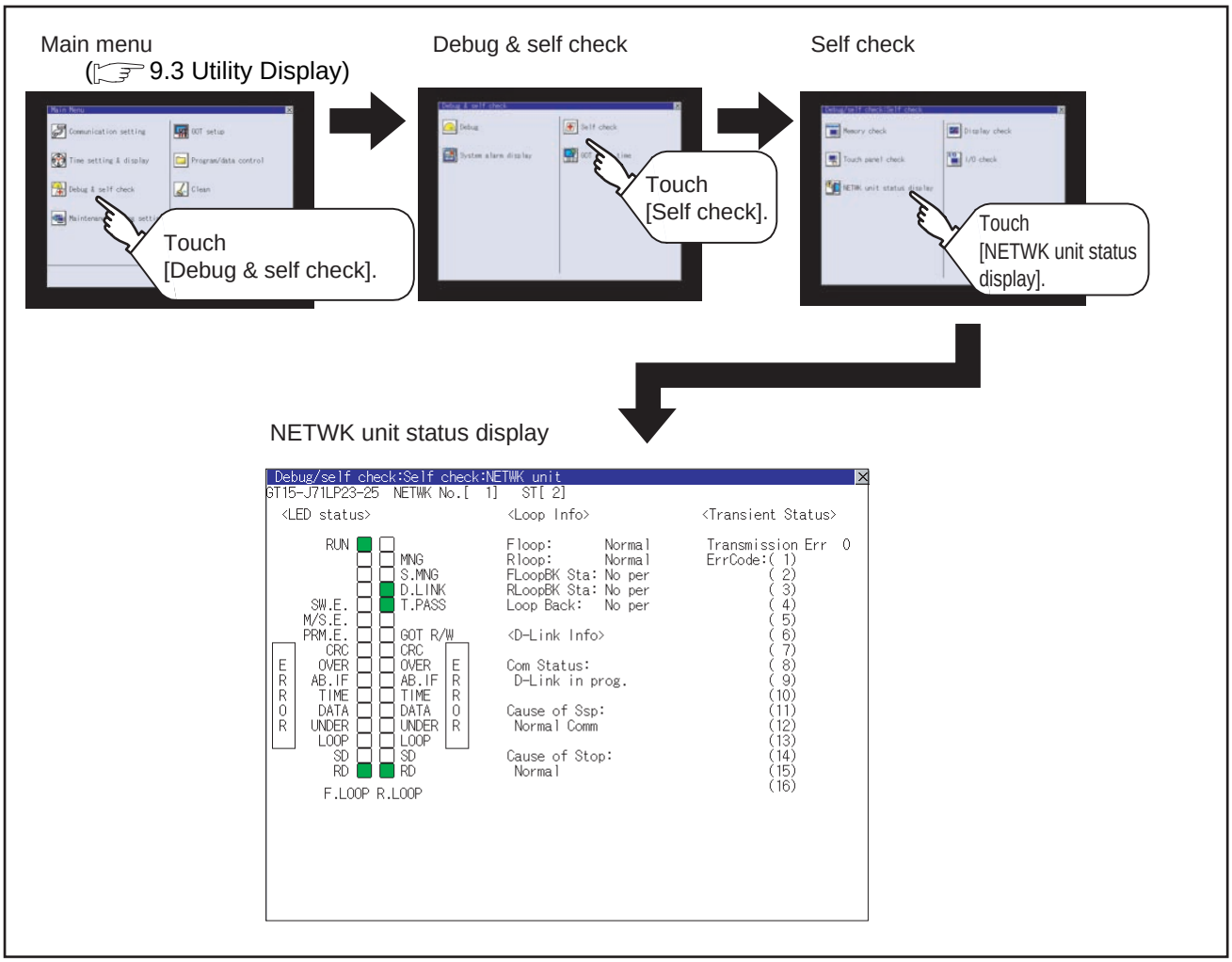
The LED status or error status of a network module can be checked.
For the corrective actions for errors that occur on the network, refer to the following manual.

☞ The Reference Manual of the MELSECNET/H or MELSECNET/10 network system (PLC to PLC network) to be used

CC-Link IE Controller Network Reference Manual

The User's Manual of the CC-Link system master/local module to be used

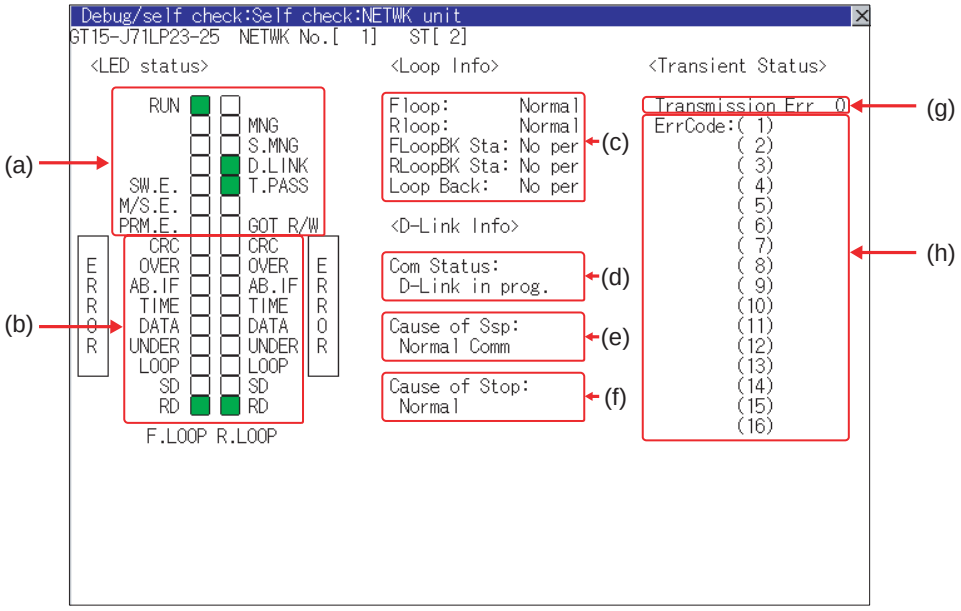
14.8.2 Displaying the NETWK unit status display



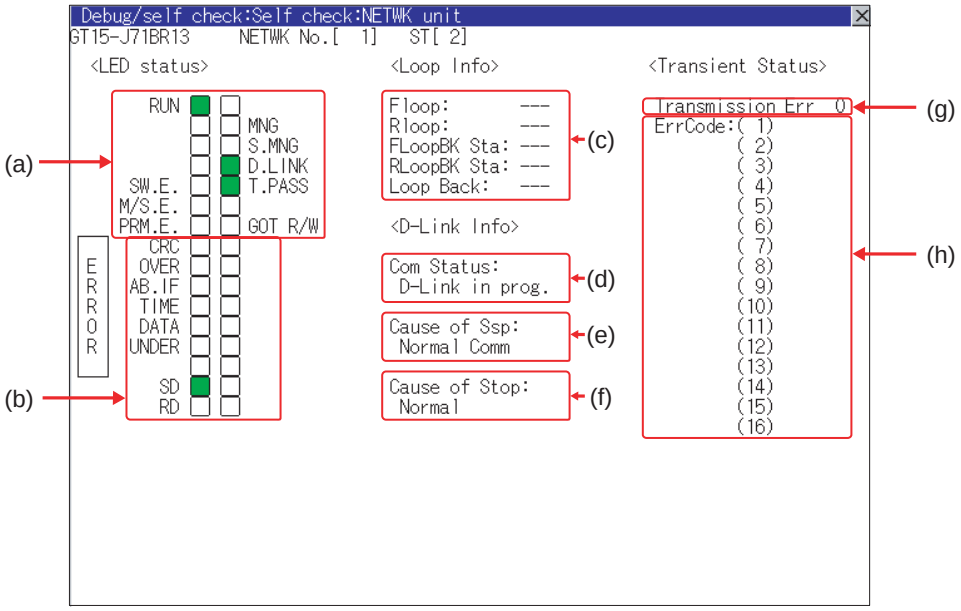
14.8.3 Display example of the NETWK unit status display

1 MELSENCNET/H communication unit

GT15-J71LP23-25



GT15-J71BR13



(1) LED status

Displays the MELSECNET/H communication unit operation status.

No.	Item	LED color*	Lit	Not lit
(a)	RUN	Green	Data link normal	Data link error
	MNG	Green	Operating as control station	Operating other than as control station
	S.MNG	Green	Operating as sub control station	Operating other than as sub control station
	D.LINK	Green	Data link being executed	Data link stopped
	T.PASS	Green	Baton pass being executed	Baton pass not executed
	SW.E.	Green	Switch setting error	Normal
	M/S.E.	Green	Duplicate station number and control station error	Normal
	PRM.E.	Green	Parameter error	Normal
	GOT R/W	Green	Accessed from GOT	Not accessed from GOT
(b)	CRC	Red	Code check error	Normal
	OVER	Red	Data entry delay error	Normal
	AB.IF	Red	All reception data 1	Normal
	TIME	Red	Time limit exceeded	Normal
	DATA	Red	Reception data error	Normal
	UNDER	Red	Send data error	Normal
	LOOP	Red	Forward/reverse loop reception error	Normal
	SD	Green	Sending data	
	RD	Green	Receiving data	

*: For monochrome display, it is displayed as ■ (lit) or □ (not lit).

(2) Loop information

Displays the MELSECNET/H communication unit loop status.

No.	Item	Description
(c)	F loop*	Displays the status (Normal/NG) of the F loop.
	R loop*	Displays the status (Normal/NG) of the R loop.
	FLoopBK Sta*	Displays the F loopback station execution status (No per/Number of the station at which loopback is executed).
	RLoopBK Sta*	Displays the R loopback station execution status (No per/Number of the station at which loopback is executed).
	Loop Back *	Displays the loopback status (No per/Perf). No per: Loop normal, forward loop error, reverse loop error, data link not possible Perf: During loopback

*: For the GT15-J71BR13, "---" is displayed.

(3) Data link information

Displays the MELSECNET/H communication unit data link information (communication status, cause of communication suspension, cause of communication stop).

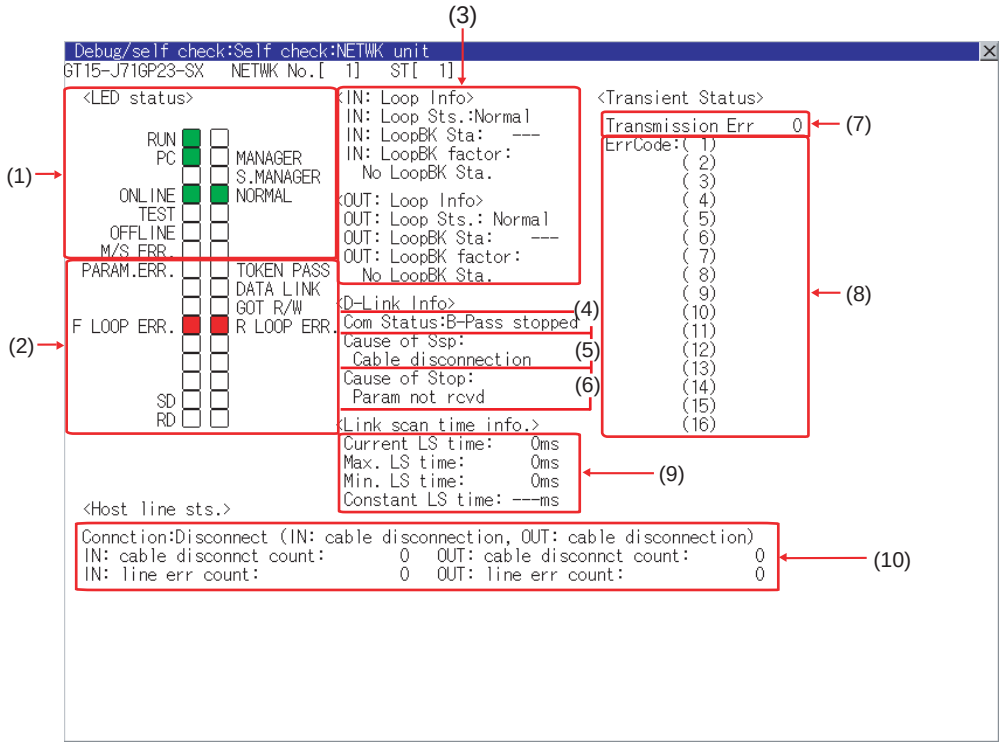
No.	Item	Description
(d)	Com Status	Displays the communication status of the host. D-Link in prog. : FData link being executed D-Link Stop(A)ss : Cyclic transmission stopped from other station D-Link Stop (H) : Cyclic transmission stopped by host B-Pass exec (No Area) : Host B/W send no allocation B-Pass exec (Param Err) : Error in host parameters B-Pass exec (Param unreceived) : Common parameters not received Disconnect (No B-Pass) : Station numbers duplicated, cable not connected Disconnect (Line Err) : Cable not connected Testing : Testing online/offline Reset. in prgr. : Hardware failure
(e)s	Cause of Ssp	Displays the cause of disabled communication (transient transmission) of the host. Normal Comm : Communicating normally Offline : Offline Offline test : Testing offline Initialize : Error (error code: F101, F102, F105) Change Ctrl Sta : Error (error code: F104, F106) Testing Online : FError (error code: F103, F109, F10A) Baton Missing : Error (error code: F107) Baton Duplicated : Error (error code: F108) Dup Sta No : Error (error code: F10B) Dup Ctrl Sta : Error (error code: F10C) Rcv Retry Err : Error (error code: F10E) Send Retry Err : Error (error code: F10F) Time Out Err : Error (error code: F110) Abnormal Line : Error (error code: F112) Disconnection : Error (error code: F11B) No Own Sta Baton : Error (error code: F11F) Other (error code) : Error (error code: displayed)
(f)	Cause of Stop	Displays the cause of disabled data link (cyclic transmission) of the host. Normal : Communicating normally StopOrder : Cyclic transmission of all stations stopped from host or other station No Shared Param : Parameters cannot be received Bad Shared Param : Set parameter error Bad Self Sta CPU : A medium/critical error occurred in the host CPU Com Aborted : Host data link error occurred

(4) Transient status

Displays the number of transient transmission errors and the error code.

No.	Item	Description	
(g)	Transmission Err	Displays the number of transient transmission errors.	
(h)	ErrCode	For other than the GT155 □	Error histories of 16 errors are displayed in 16 lows from the latest.
		For the GT155 □	Only the latest error history is displayed as only a single low is provided.

2 CC-Link IE controller network communication unit



(1) LED status

Displays the operation status of the CC-Link IE controller network communication unit.

No.	Item	LED color*	Lit	Not lit	Blink
(1)	RUN	Green	Operating normally	Hardware failure or WDT error	
	PC	Green	Data link being executed	Data link not executed	With communication error stations or duplicated station numbers
	ONLINE	Green	Online mode	Other than online mode	
	TEST	Green	Test mode	Other than test mode	
	OFFLINE	Green	Offline mode	Other than offline mode	
	M/S.ERR	Red	Duplicated control station or station No.	No duplicated control station or station No.	
	MANAGER	Green	Control station in operation	Other than control station in operation	
	S.MANAGER	Green	Sub-control station in operation	Other than sub-control station in operation	
	NORMAL	Green	Normal station in operation	Other than normal station in operation	

No.	Item	LED color*	Lit	Not lit	Blink
(2)	PARAM.ERR	Red	Parameter error	No parameter error	
	F LOOP ERR	Red	IN-side error	No IN-side error	
	SD	Green	Sending data	Not sending data	
	RD	Green	Receiving data	Not receiving data	
	TOKEN PASS	Green	Baton pass being executed	Baton pass not executed	
	DATA LINK	Green	Data link being executed (Cyclic transmission executed)	Data link not executed	Data link being executed (Cyclic transmission stopped)
	GOT R/W	Green	Offline, or hardware test, self-loopback test, internal self-loopback test or station-to-station test being executed	Online or circuit test being executed	
	R LOOP ERR	Red	OUT-side error	No OUT-side error	

*: For monochrome display, it is displayed as ■ (lit) or □ (not lit).

(2) Loop information

Displays the loop status of the CC-Link IE controller network communication unit.

No.	Item	Description
(3)	IN: Loop Sts.	Displays the IN-side connection status of the host station. (Normal/Rev connect)
	IN: LoopBK Sta	Displays the station No. of the IN-side loopback station. (No loopback station: ---, value: 1 to 120)
	IN: LoopBK factor	Displays the cause of the loopback. (No LoopBK Sta./OUT: cable disconnection/OUT: connecting a line/OUT: wrong cable connection)
	OUT: Loop Sts.	Displays the OUT-side connection status of the host station. (Normal/Rev connect)
	OUT: LoopBK Sta	Displays the station No. of the OUT-side loopback station. (No loopback station: ---, value: 1 to 120)
	OUT: LoopBK factor	Displays the cause of the loopback. (No LoopBK Sta./IN: cable disconnection/IN: connecting a line/IN: wrong cable connection)

(3) Data link information

Displays the data link information (Com Status, Cause of Ssp, Cause of Stop) of the CC-Link IE controller network communication unit.

No.	Item	Description
(4)	Com Status	Displays the communication status of the host station. D-Link in prog. D-Link stopped B-Pass exec B-Pass stopped Testing Offline Offline
(5)	Cause of Ssp	Displays the cause of the interrupted communication (transient transmission) of the host station. Normal Comm Cable disconnection Wrong cable connection Checking cable IN/OUT Disconnecting/returning to system Offline Offline test Self-check mode
(6)	Cause of Stop	Displays the cause of the interrupted data link (cyclic transmission) of the host station. Normal Comm StopOrder D-Link observation timer time up Testing Line Param not rcvd Host out of range Host reservation Dup Host No. Dup CtrlSta Sta.No. not set Invalid NETWK No. Param Err Params in comm. CPU stop error CPU pwr stp err

(4) Transient status

Displays the number of transient transmission errors and the error codes.

No.	Item	Description	
(7)	Transmission Err	Displays the number of transient transmission errors.	
(8)	ErrCode	Other than GT155□	The histories of 16 latest errors are displayed in 16 rows in reverse chronological order.
		GT155□	Only the latest error is displayed in one row.

(5) Link scan time information

Displays the link scan time.

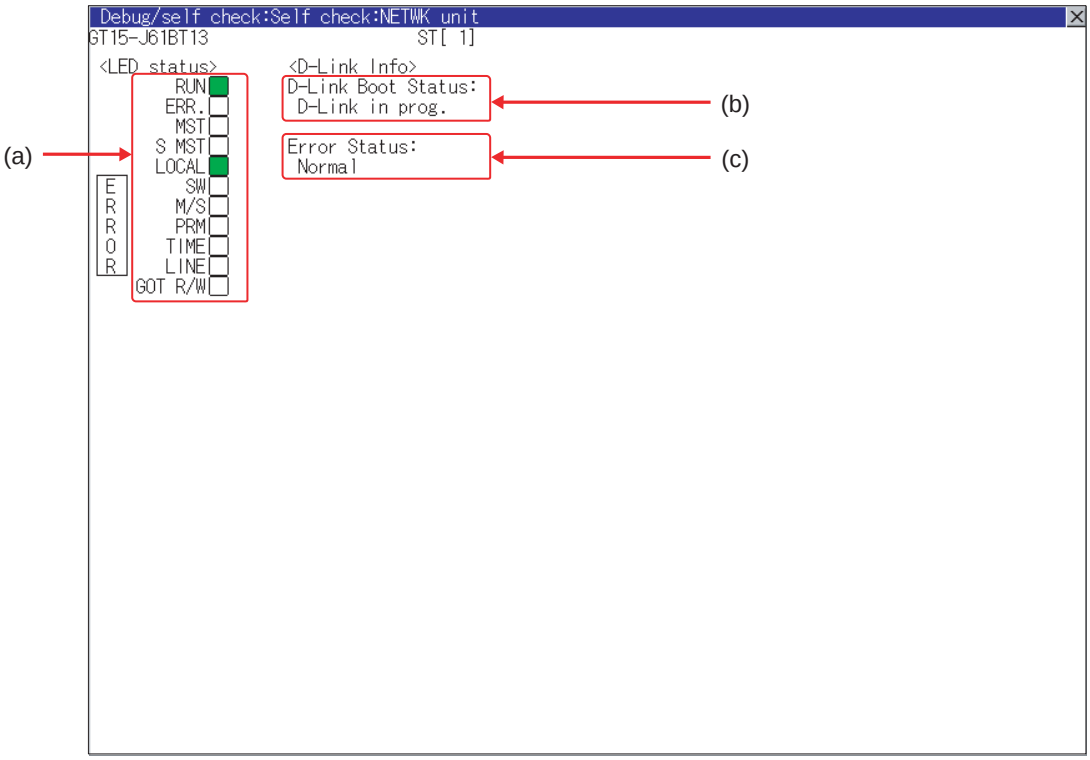
No.	Item	Description
(9)	Current LS time	Displays the current link scan time.
	Max. LS time	Displays the maximum link scan time.
	Min. LS time	Displays the minimum link scan time.
	Constant LS time	Displays the link scan time set in the parameter.

(6) Host station line status

Displays the connection status of the CC-Link IE controller network communication unit

No.	Item	Description	
(10)	Connction	Displays the connection status of the host station.	
		Other than GT155 ☐	Normal
			IN: Loop Back (OUT: cable disconnection)
			IN: Loop Back (OUT: connecting a line)
			IN: Loop Back (OUT: wrong cable connection)
			OUT: Loop Back (IN: cable disconnection)
			OUT: Loop Back (IN: connecting a line)
			OUT: Loop Back (IN: wrong cable connection)
			Disconnect (IN: cable disconnection, OUT: cable disconnection)
			Disconnect (IN: cable disconnection, OUT: connecting a line)
			Disconnect (IN: cable disconnection, OUT: wrong cable connection)
			Disconnect (IN: connecting a line, OUT: cable disconnection)
			Disconnect (IN: connecting a line, OUT: connecting a line)
			Disconnect (IN: connecting a line, OUT: wrong cable connection)
			Disconnect (IN: wrong cable connection, OUT: cable disconnection)
			Disconnect (IN: wrong cable connection, OUT: connecting a line)
			Disconnect (IN: wrong cable connction, OUT: wrong cable connction)
		GT155 ☐	Normal
			OUT: cable disconnection
			OUT: connecting a line
			OUT: wrong cable connection
			IN: cable disconnection
			IN: connecting a line
			IN: wrong cable connection
			Disconnect
	IN: cable disconnct count	0: No error, 1 or more: Number of accumulated errors	
	IN: line err count	0: No error, 1 or more: Number of accumulated errors	
	OUT: cable disconnct count	0: No error, 1 or more: Number of accumulated errors	
	OUT: line err count	0: No error, 1 or more: Number of accumulated errors	

3 CC-Link communication unit



(1) LED status

Displays the CC-Link communication unit (GT15-J61BT13) operation status.

No.	Item	LED color	Lit	Not lit	Blink
(a)	RUN	Green	Running normally	WDT error occurred or unit being reset	
	ERR.	Red	All station communication error	No communication error occurred or unit being reset	There is a communication error station or duplicated station numbers.
	TIME	Red	No responses from all stations due to cable breakage or transmission path affected by noise	Responses from all stations	
	MST	Green	Operating as master station	Operating other than as master station	
	SW	Red	Switch setting error	No switch setting error	
	LINE	Red	Cable breakage error	No cable breakage error	
	S MST	Green	Operating as standby master station	Operating other than as standby master station	
	M/S	Red	Duplicate master station error	No duplicate master station error	
	LOCAL	Green	Operating as local station	Operating other than as local station	
	PRM	Red	Parameter error	No parameter error	
	GOT R/W	Green	Accessed from GOT	Not accessed from GOT	

(2) Data link information

Displays the CC-Link communication unit (GT15-J61BT13) data link startup status and error status.

No.	Item	Description		
(b)	D-Link Boot Status	Displays the data link startup status.		
		D-Link in prog.	:	Data link being executed
		D-Link Offline	:	Data link being stopped
		Initialize	:	Set to the initial status
		Parameter wait	:	Parameter not received
		Disconnect (No Polling)	:	In cut-off status with no inquiry from master station
		Disconnect (Line Err)	:	In cut-off status due to line error
		Disconnect (Other)	:	In cut-off status due to other causes
		Testing Line	:	Line test being executed
		Testing Pram Setup	:	Parameter setting test being executed from master station
		Auto Reconnecting	:	Return processing being executed automatically
		Reset. in prgr.	:	CC-Link communication unit being reset (GOT reset status)
(c)	Error Status	Displays the status of the current error.		
		Normal	:	Normal status
		Invalid TransPath	:	Transmission path error detected
		Invalid Parameter	:	Parameter error detected
		CRC Error	:	Reception data error detected
		Time Out Error	:	Timeout error detected in data reception
		Abort Error	:	Error detected in data communication
		Invalid Setup	:	Invalid station number, station type, transmission speed, or mode setting detected
		Other Abnormality	:	Error due to some other cause detected

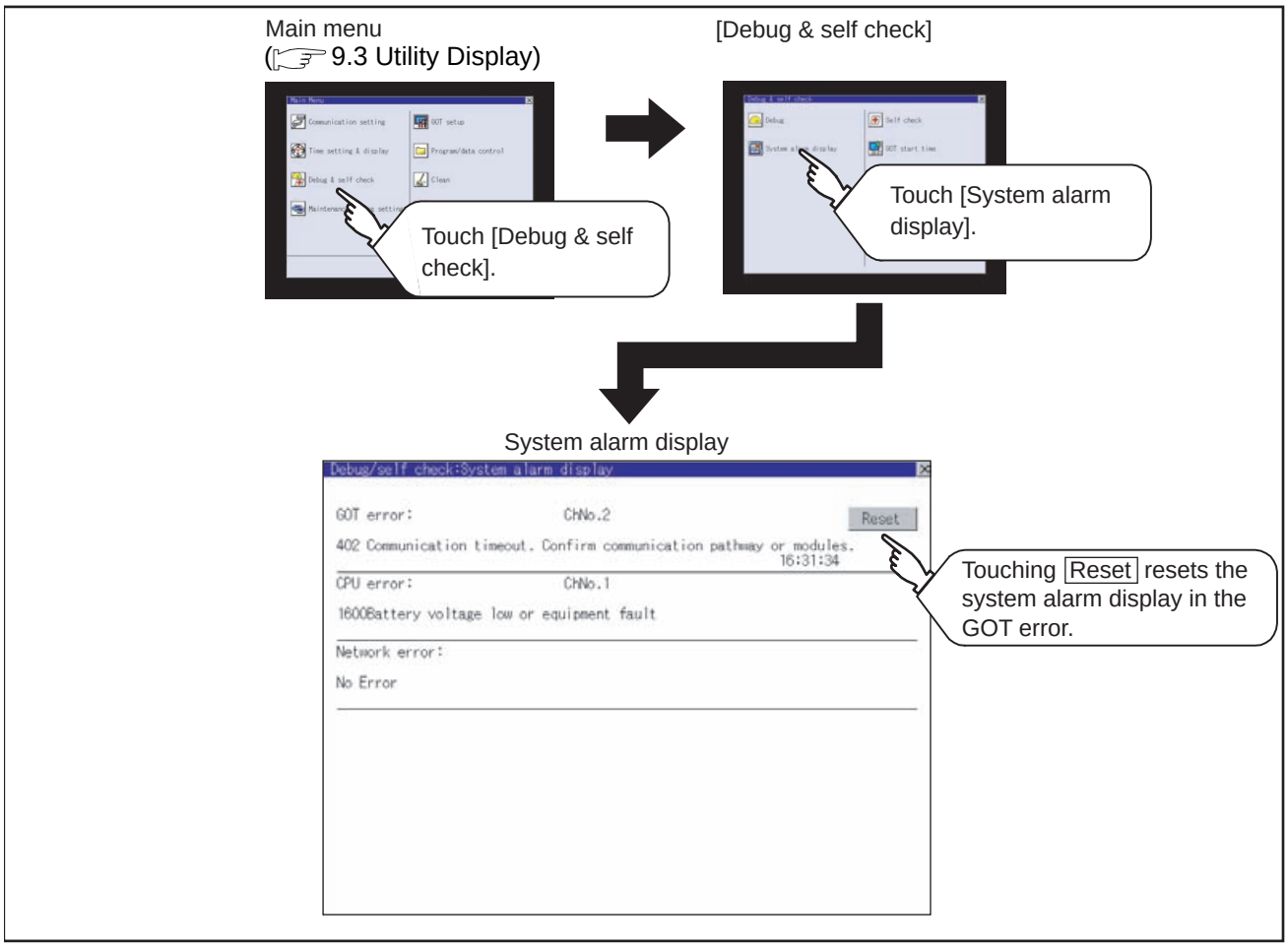
14.9 System Alarm Display

14.9.1 System alarm display function

System alarm display is the function to display error code and error message when an error occurs in GOT, controller or network.
System alarms can be reset on the System alarm display screen.
For details of system alarm, refer to the following manual.

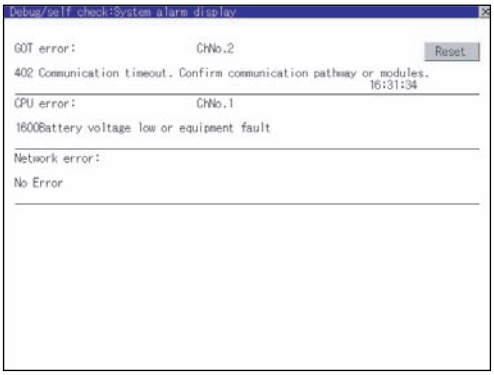
☞ GT Designer2 Version□ Screen Design Manual (8. ALARM)

14.9.2 Displaying the system alarm display

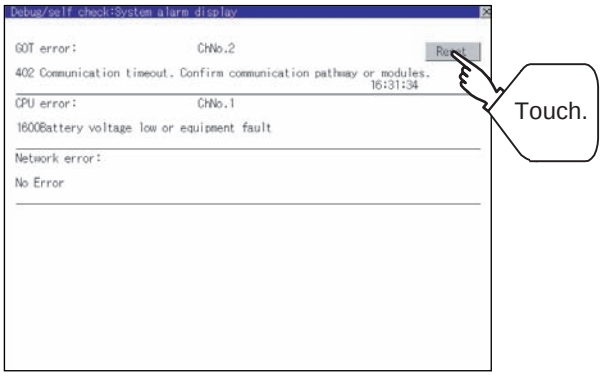


14.9.3 Operating the system alarm display

1 System Alarm display resetting



1 Eliminate each cause of the system alarm being occurred.
Error causes can be identified by the error code, error message and channel No. displayed on the System alarm display screen.
(☞ 20. TROUBLESHOOTING)



2 A method for resetting system alarm depends on an error.

- GOT error

  Touch the [Reset] button to reset system alarms.
- CPU error and Network error
  The system alarm is automatically reset after its cause is eliminated.

Point

(1) Before resetting the system alarm display in the GOT error
Eliminate the system alarm cause before resetting the system alarm display in the GOT error.
If not eliminated, the system alarm display in the GOT error will not be reset even after the reset operation.

(2) Processings with reset operation
The following data in the system information are also reset.
- GOT error code (Write device)
- GOT error detection signal (System Signal 2-1.b13)

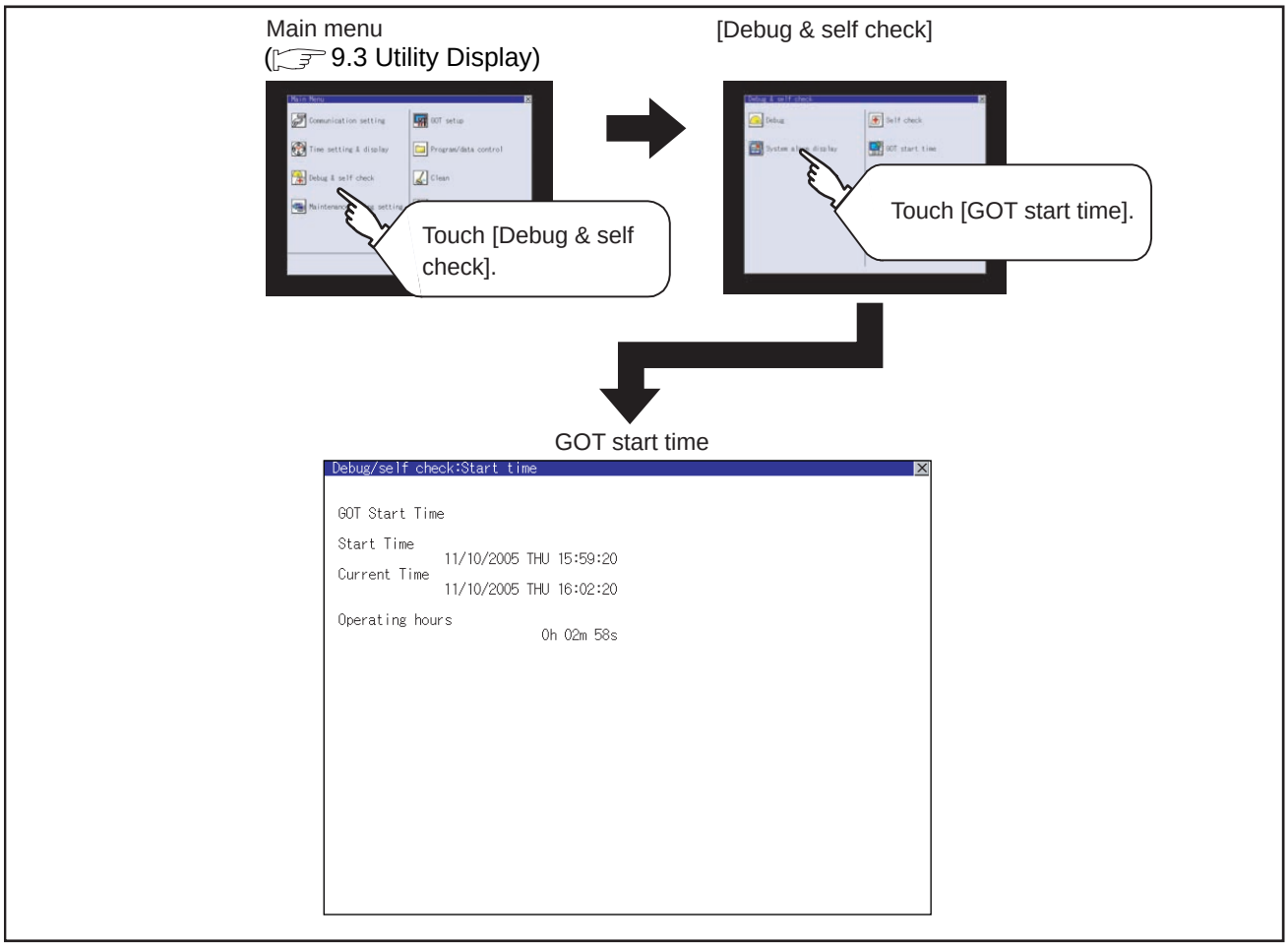
14.10 GOT Start Time

14.10.1 GOT start time function

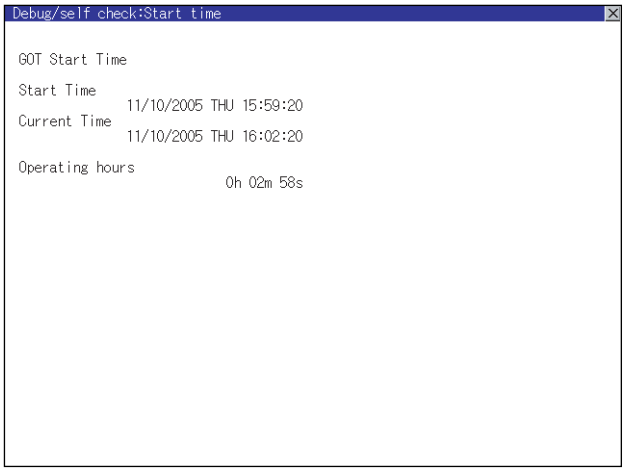
GOT start time is the function to display the following date and time.

- Start time of GOT
- Current time of GOT
- Operating hours of GOT

14.10.2 Display operation of GOT start time



14.10.3 Display of GOT start time



Item	Description
Start Time	Displays the time when the GOT was powered on or reset-restarted (OS installation, communication setting change).
Current Time	Displays the current time.
Operating hours	Displays operating hours of the GOT. The displayed operating hours is the accumulated time while GOT is powered on or reset-restarted (OS installation, communication setting change). When powering off or reset-restarting the GOT, the operating hours is cleared.

Point

To display correct time

Set the clock of GOT.(☞12.1 Time Setting and Display)
When the clock has not been set, the correct time is not displayed at [Start Time] and [Current Time].

Remark

Time displayed at [Operating hours]

[Operating hours] is displayed irrespective of [Start Time] and [Current Time].
When changing the clock of the GOT, [Operating hours] does not match with the difference between [Current Time] and [Start Time]. ([Operating hours] is not the time calculated from [Current Time] and [Start Time].)
The time displayed at [Operating hours] is a reference for the accumulated time while GOT is powered on or reset-restarted (OS installation, communication setting change).

14.11 Operator Information Management

The operator information management is a function to display a list of the operator information and add, change, or delete the operator information to be used for the operator authentication.
For details of the operator authentication, refer to the following manual.

☞GT Designer2 Version□ Screen Design Manual (3.5 Set Password)

Items	Description	Reference page
Operator management	Enables adding, editing, deleting, importing, and exporting the operator information.	14-36
Password change	Enables changing passwords to be used for login and logout in/out of the GOT.	14-48
Function setting	Enables setting the automatic logout time and password expiration date.	14-51

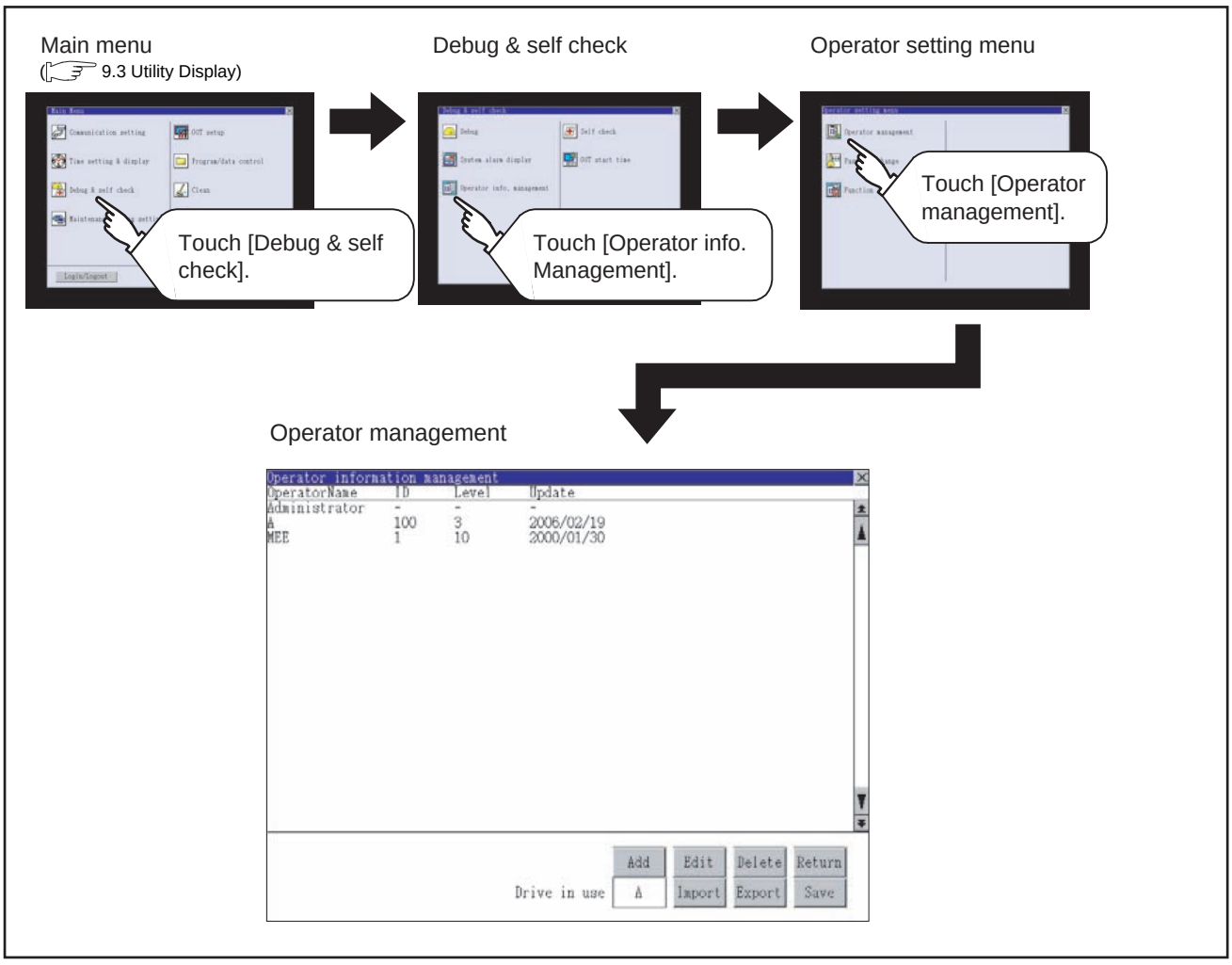
14.11.1 Operator management

1 Operator management function

The function enables adding, editing, and deleting the operator information to be used for the operator authentication.
The function also enables importing and exporting the operator information as the backup data to/from a memory card.

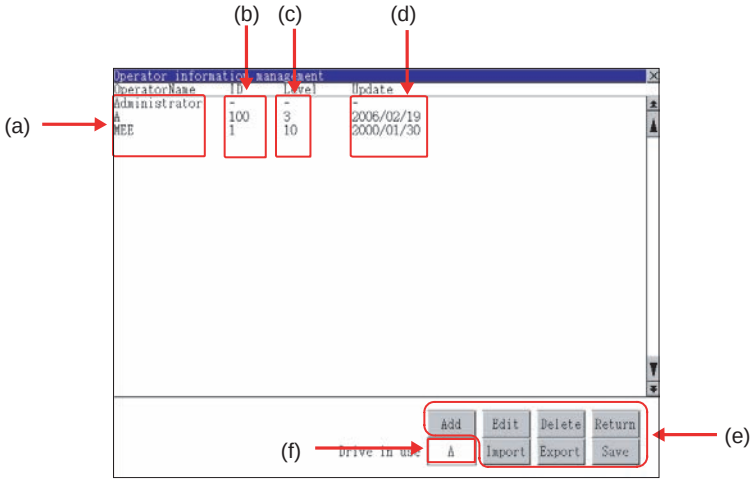
Function	Description	Reference page
Add operation	Adds operator information to the GOT.	14-41
Edit operation	Edits the operator information stored in the GOT.	14-43
Delete operation	Deletes the operator information stored in the GOT.	14-44
Return operation	Restores the current operator information to the previous saved one.	14-45
Import operation	Imports the operator information that is already exported to a memory card to the GOT.	14-46
Export operation	Exports the operator information stored in the GOT to a memory card.	14-47

2 Display operation of operator management



3 Display example of operator management

(1) Operator information management screen



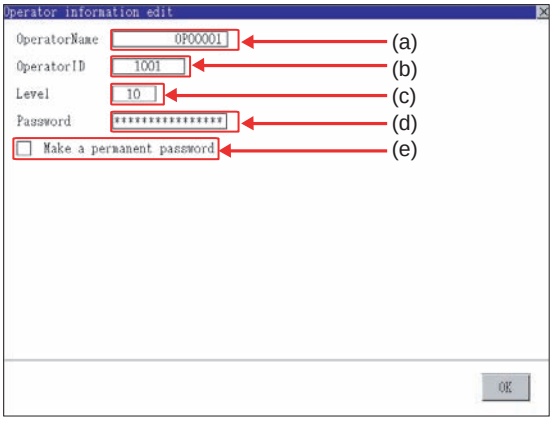
No.	Item	Description
(a)	Operator Name	Displays operator names.

No.	Item	Description
(b)	ID	Displays operator IDs.
(c)	Level	Displays security levels for operators.
(d)	Update	Displays the last updated dates of the operator information.
(e)	Operation keys	Execution keys for each function
(f)	Drive in use	Displays and sets the storage location for imported and exported operator information. Touch the item, and then the display switches. (A: Built-in CF card/B: Memory card) The display switches only when a memory card is installed on the GOT.

(2) Operator information edit screen

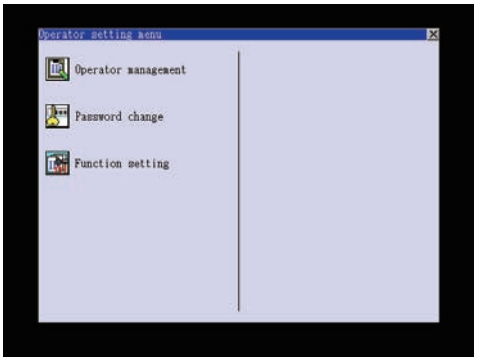
Touch the [Add] button or touch the [Edit] button with the operator information selected on the Operator information management screen, and then the Operator information edit screen is displayed.

The operator information can be edited.

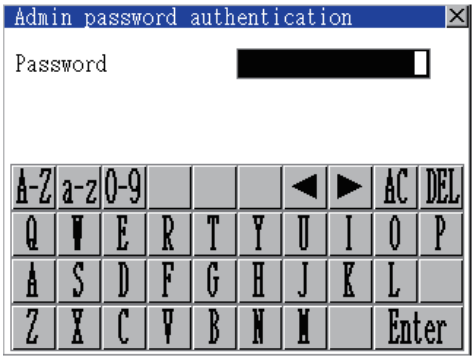


No.	Item	Description
(a)	Operator Name	The operator name to be edited is displayed or input an operator name to be added. (Up to 16 alphanumeric characters)
(b)	Operator ID	The operator ID to be edited is displayed or input an operator name to be added. (Setting range: 1 to 32766, Maximum number of registrations: 255)
(c)	Level	The operator security level to be edited is displayed or input an operator security level to be added. (0 to 15)
(d)	Password	Input a password.
(e)	Make a permanent password	Switches the setting of the item disabled and enabled. (☐: Disabled ☒: Enabled)

4 Operator management operation



1 Touch [Operator management] in the operator setting menu.



2 The Admin password authentication screen is displayed, and then input the administrator password.

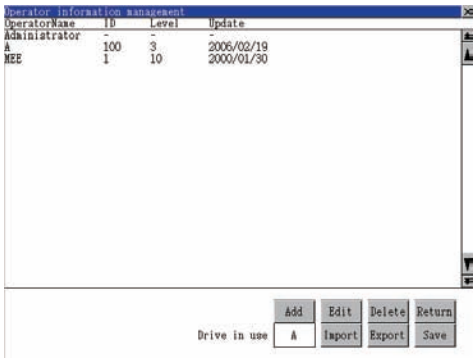
Character types to be input can be changed with touching the following buttons.

A-Z Alphabet capital

a-z Alphabet small letter

0-9 Numeric

When the input is completed, touch the Enter key.



3 When the administrator password is correctly input, the Operator information management screen in displayed.

For operating operation switches, refer to the following.

Add.....☞ this section (1)

Edit.....☞ this section (2)

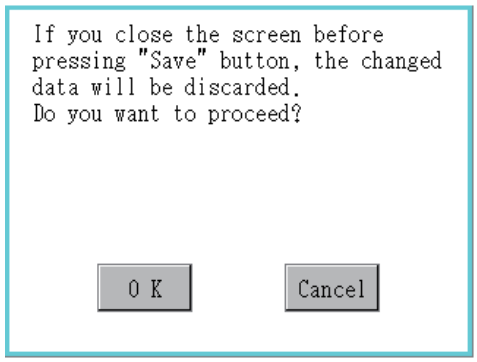
Delete.....☞ this section (3)

Return.....☞ this section (4)

Import.....☞ this section (5)

Export.....☞ this section (6)

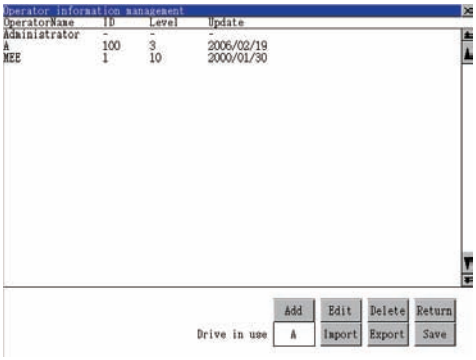
4 After all settings are completed, touch the Save button, and then the settings are saved.



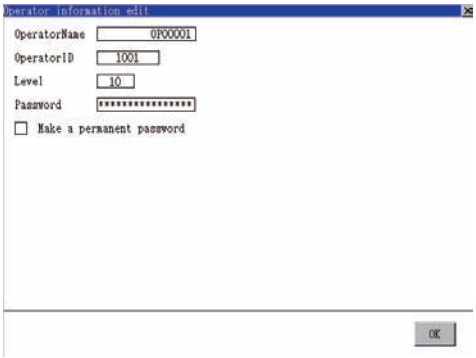
5 Touch the ☒ button without touching the Save button, and then the dialog box shown left is displayed.

(1) Add operation

Add operator information to the GOT.



1 Touch the [Add] button.



2 The Operator information edit screen is displayed, and then touch an item to be edited.

(a) OperatorName
(b) OperatorID
(c) Level
(d) Password
(e) Make a permanent password



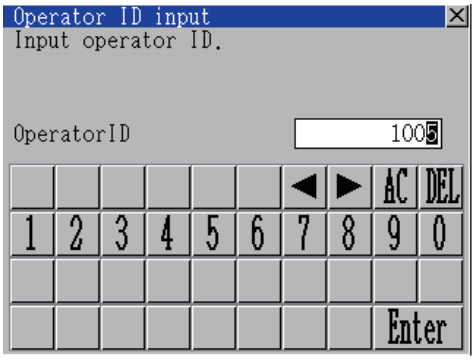
(a) Touch the OperatorName, and then the Operator name input dialog box is displayed. Input an operator name.
Character types to be input can be changed with touching the following buttons.

[A-Z] Alphabet capital

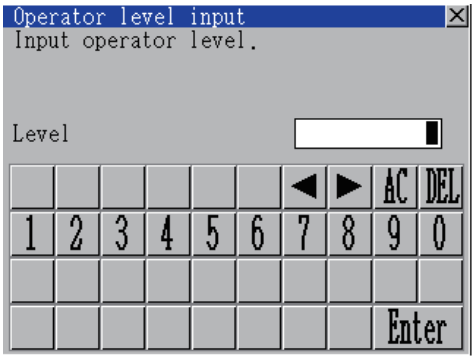
[a-z] Alphabet small letter

[0-9] Numeric

When the input is completed, touch the [Enter] key.

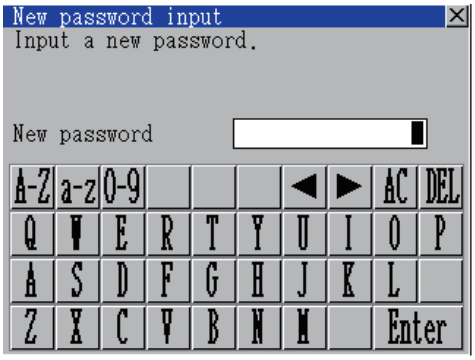


(b) Touch the OperatorID, and then the Operator ID input dialog box is displayed.
Input an operator ID.
When the input is completed, touch the [Enter] key.



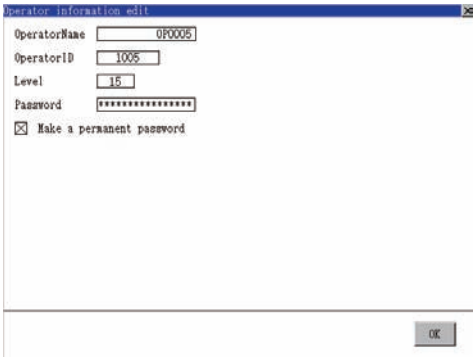
(c) Touch the level, and then the Operator level input dialog box is displayed. Input an operator level.
When the input is completed, touch the Enter key.

When the level of the operator being login is changed during editing the operator information, a new level is not reflected until you log out of the GOT once and log in the GOT again.



(d) For changing passwords during editing, touch the password.
The New password input dialog box is displayed, and then input a password.
When the input is completed, touch the Enter key.

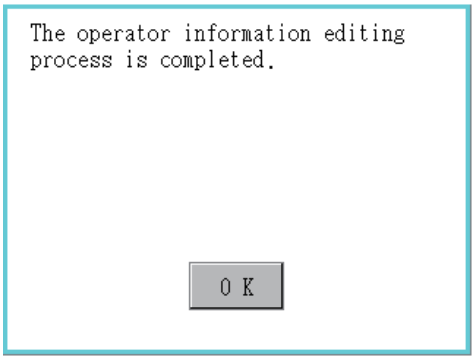
When the password input is completed, the New password input confirmation dialog box is displayed. Input the same password.



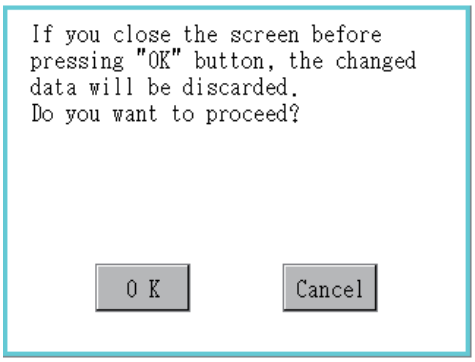
(e) For enabling the setting of [Make a permanent password], touch the check box for [Make a permanent password], and then the setting is switched.

☐: Disabled

☒: Enabled



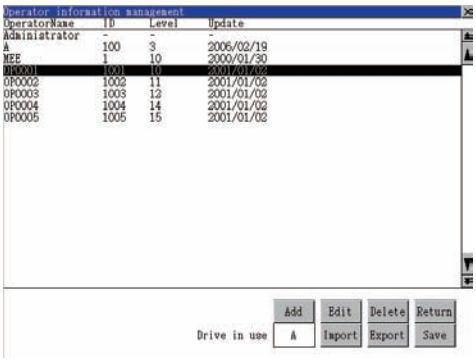
3 Touch the OK button after all items are input, and then the dialog box shown left is displayed and the input operator information is added.



4 Touch the ⊠ button without touching the OK button, and then the dialog box shown left is displayed.

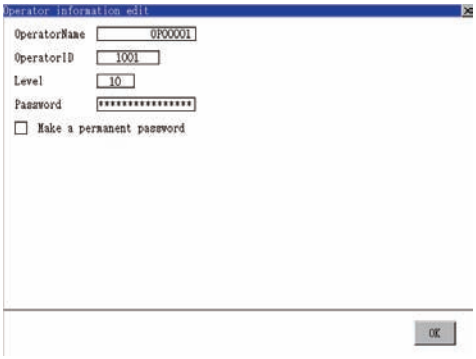
(2) Edit operation

Edit the operator information stored in the GOT.



1 Select the operator information to be edited with touching the operator information.

2 Touch the Edit button.



3 The Operator information edit screen is displayed, and then touch an item to be edited.

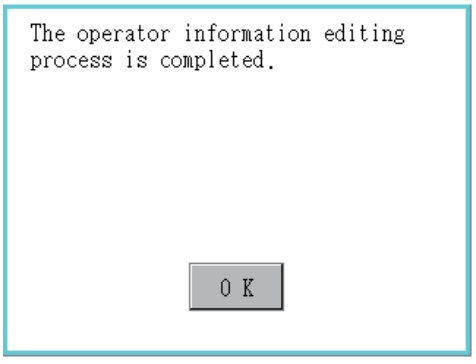
(a) Level

(b) Password

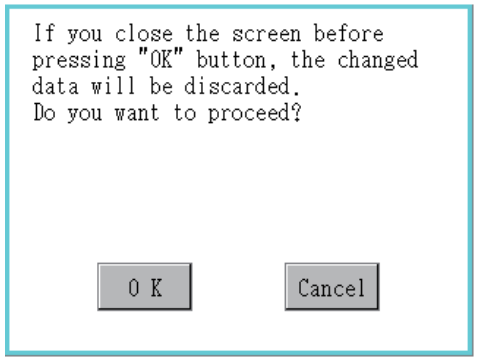
(c) Make a permanent password

For how to edit operator information, refer to the following.

☞ this section 4 (1) Add operation



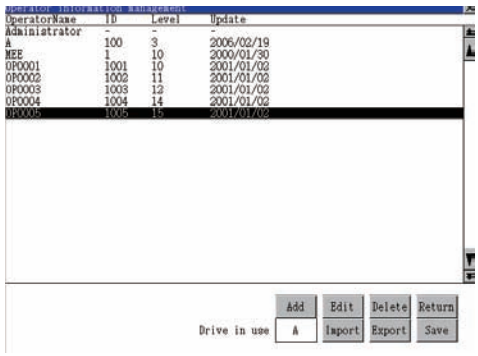
4 Touch the OK button after all items are input, and then the dialog box shown left is displayed and the input operator information is changed.



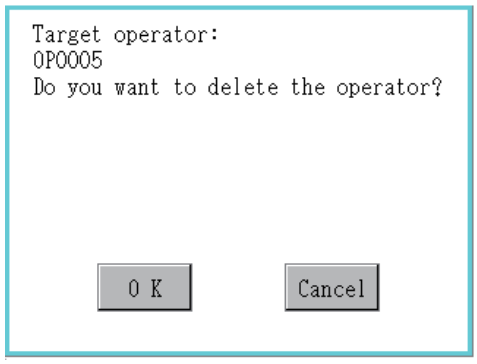
5 Touch the ⊠ button without touching the OK button, and then the dialog box shown left is displayed.

(3) Delete operation

Delete the operator information stored in the GOT.



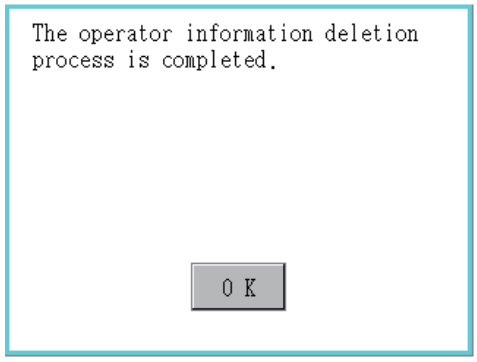
1 Select the operator information to be deleted with touching the operator information.



2 Touch the Delete button, and then the dialog box shown left is displayed.

Touch the OK button, and then the selected operator information is deleted.

Touch the Cancel button, and then the delete operation is canceled.

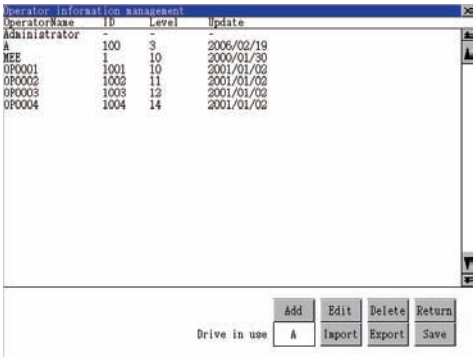


3 When the delete operation is completed, a completion dialog box is displayed.

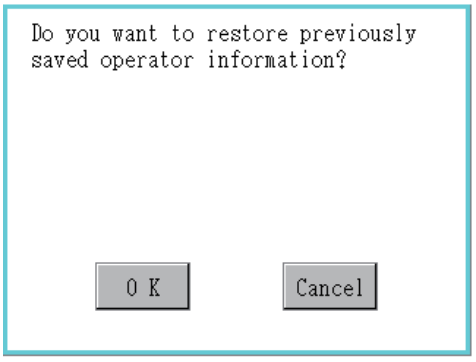
Touch the OK button, and then the dialog box is closed.

(4) Return operation

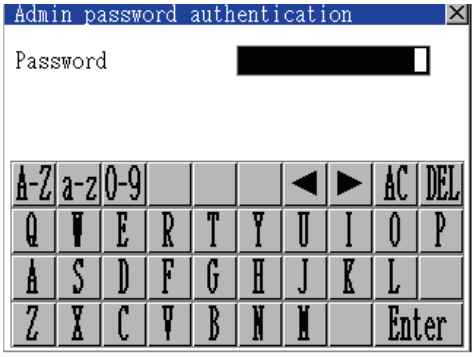
Restore the current operator information to the previous saved one.



1 Touch the [Return] button.



2 The dialog box shown left is displayed, and then touch the [OK] button.



3 The Admin password authentication screen is displayed, and then input the administrator password.

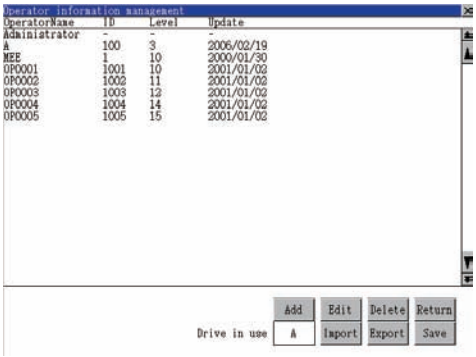
Character types to be input can be changed with touching the following buttons.

[A-Z] Alphabet capital

[a-z] Alphabet small letter

[0-9] Numeric

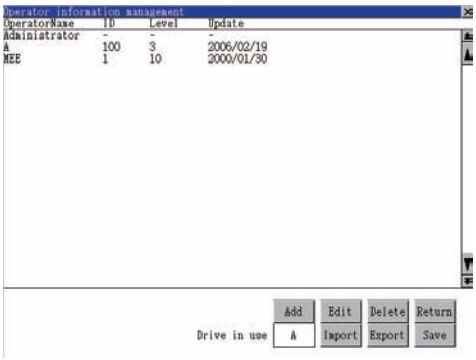
When the input is completed, touch the [Enter] key.



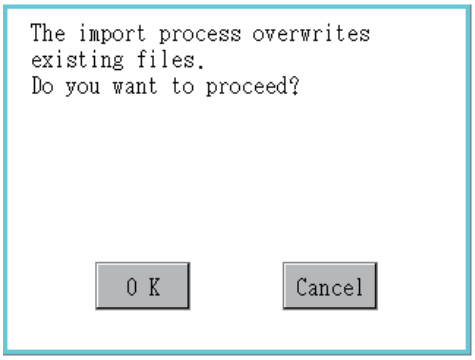
4 When the administrator password is correctly input, the current operator information is restored to the previous saved one.

(5) Import operation

Import the operator information that is already exported to a memory card to the GOT.



1 Touch the [Import] button.



2 The dialog box shown left is displayed.

Touch [OK] button, and then the Admin password authentication screen is displayed. Input the administrator password.

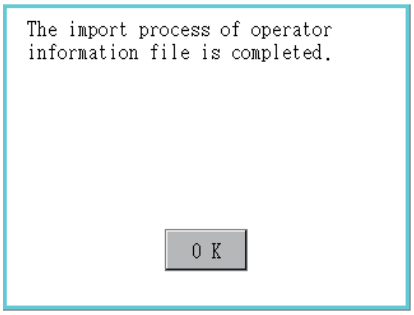
Character types to be input can be changed with touching the following buttons.

[A-Z] Alphabet capital

[a-z] Alphabet small letter

[0-9] Numeric

When the input is completed, touch the [Enter] key.

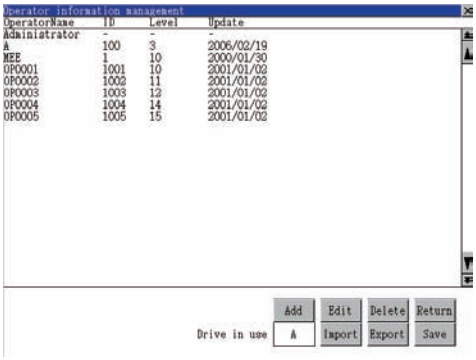


3 When the administrator password is correctly input, the dialog box shown left is displayed and the operator information stored in a memory card is imported to the GOT.

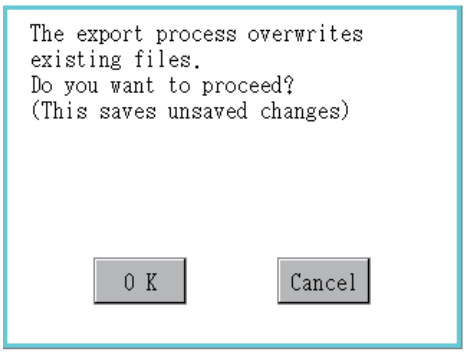
(file name: AUTHINF.G1U)

(6) Export operation

Export the operator information stored in the GOT to a memory card.



1 Touch the [Export] button.



2 The dialog box shown left is displayed.

Touch [OK] button, and then the Admin password authentication screen is displayed. Input the administrator password.

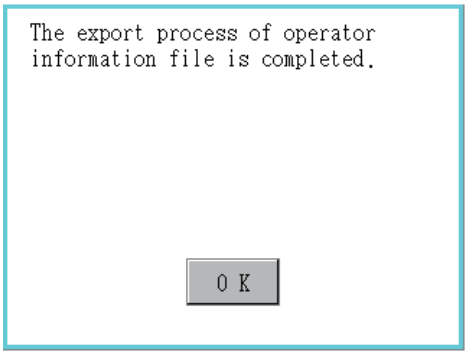
Character types to be input can be changed with touching the following buttons.

[A-Z] Alphabet capital

[a-z] Alphabet small letter

[0-9] Numeric

When the input is completed, touch the [Enter] key.



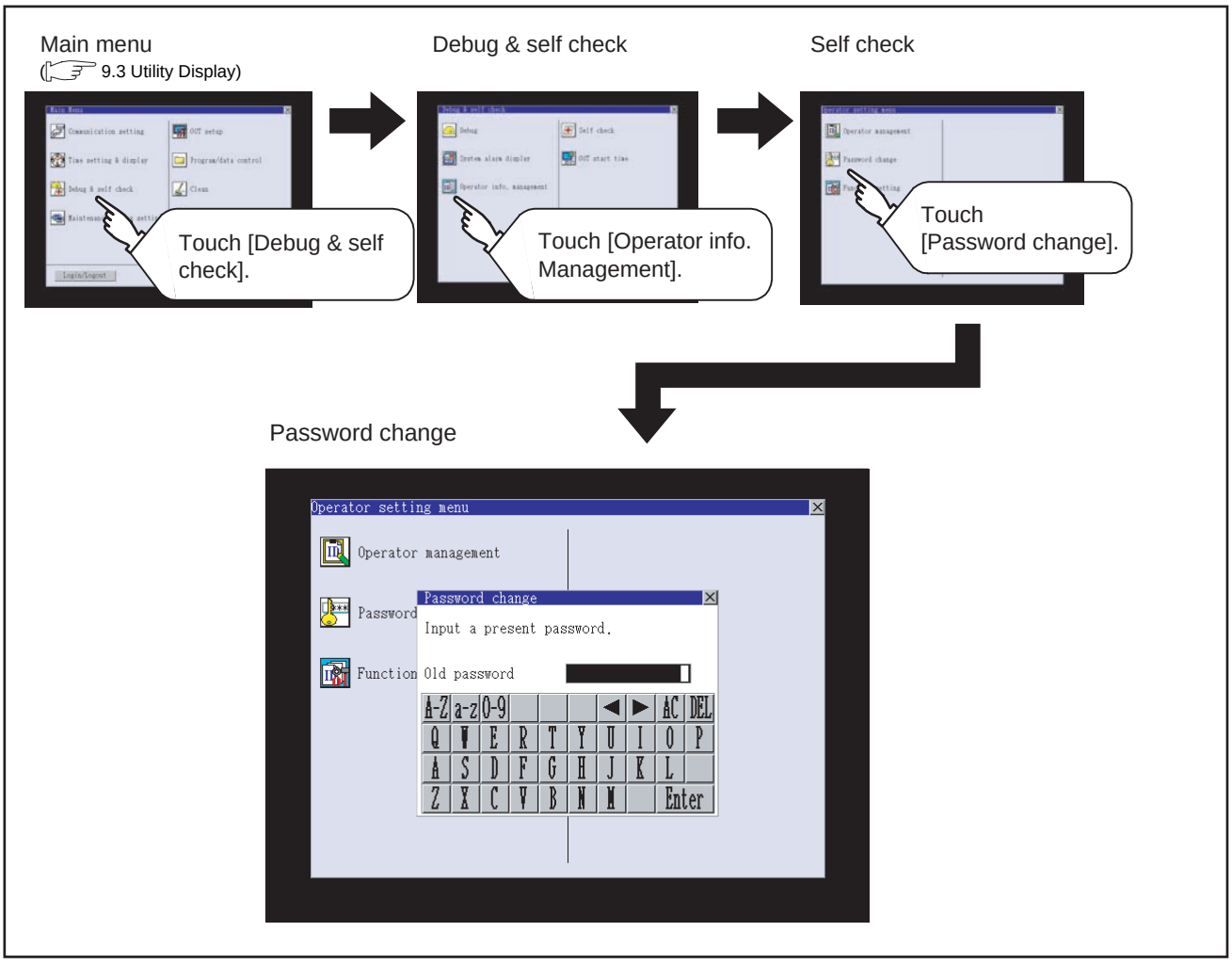
3 When the administrator password is correctly input, the dialog box shown left is displayed and the operator information stored in the GOT is exported to a memory card.

14.11.2 Password change

1 Password change function

The passwords to be used for the operator authentication can be changed.
For the password change, log into the GOT in advance with the operator name corresponding to the password to be changed.

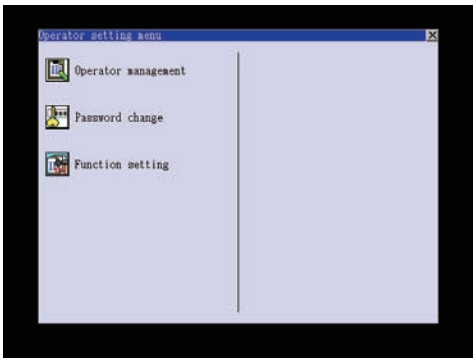
2 Display operation of password change



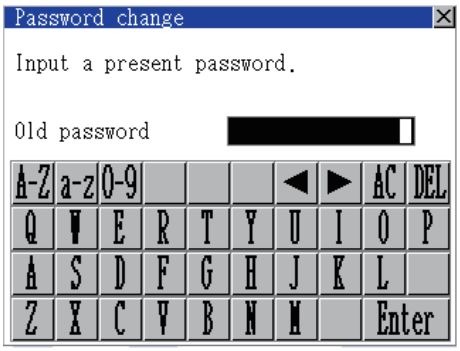
3 Password change operation



1 Log into the GOT with the operator name corresponding to the password to be changed on the Main Menu screen for the utility.



2 Touch [Password change] in the operator setting menu, and then the Password change dialog box is displayed.



3 Input the current password on the Password change dialog box.

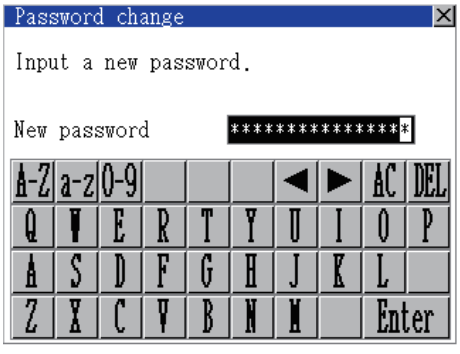
Character types to be input can be changed with touching the following buttons.

A-Z Alphabet capital

a-z Alphabet small letter

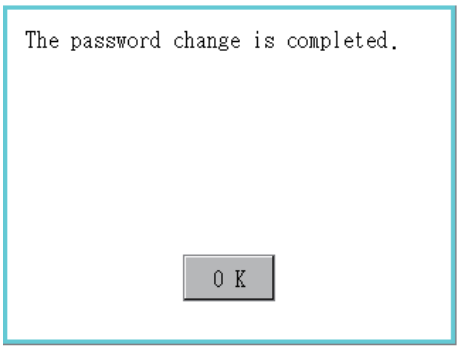
0-9 Numeric

When the input is completed, touch the Enter key.



4 Input a new password.

5 After inputting a new password, input the new password again.



6 When the new password is correctly input, the dialog box shown left is displayed and the password is changed.

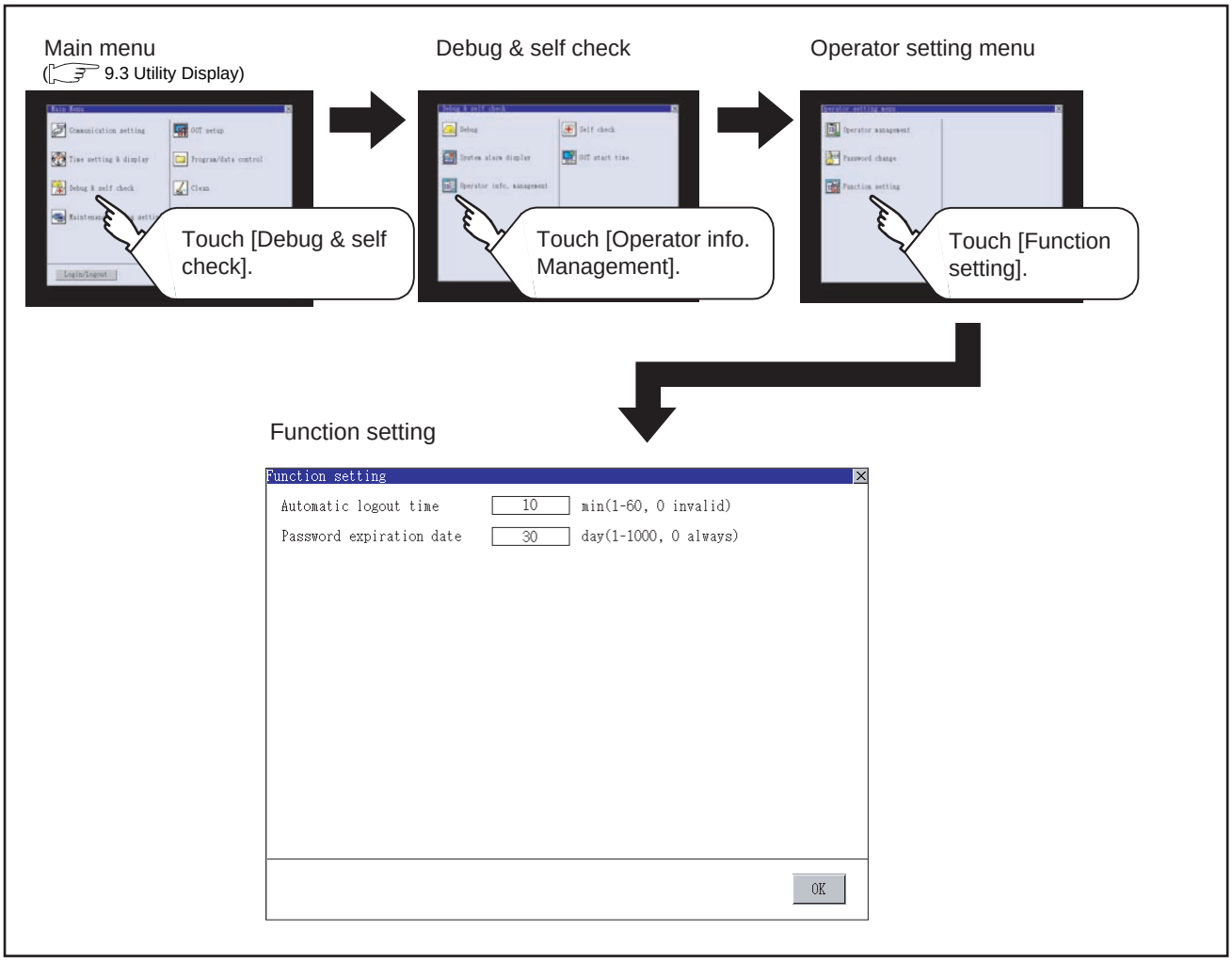
14.11.3 Function setting

1 Function setting function

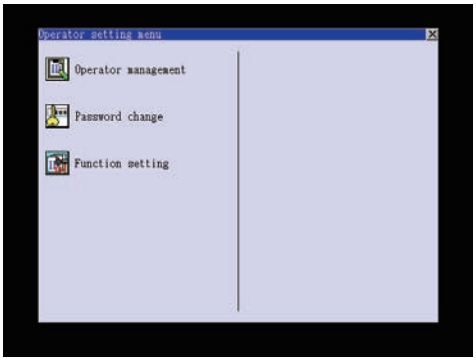
The functions for the operator information can be set.
The following items can be set.

Items	Description	Reference page
Automatic logout time	The time from when the last time the GOT is operated until when you automatically log out of the GOT can be set. (1 to 60 minutes, 0 is invalid.)	14-52
Password expiration date	Set the item for regularly changing the password to be used for the operator authentication. (1 to 1000 days, 0 is invalid.) When the password is out of date after setting the password, the GOT requests the password change.	14-53

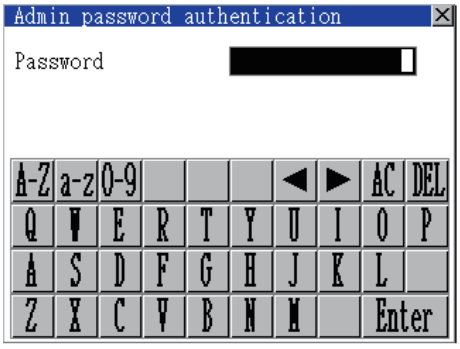
2 Display operation of function setting



3 Function setting operation



1 Touch [Function setting] in the operator setting menu, and then the Admin password authentication dialog box is displayed.



2 Input the administrator password.

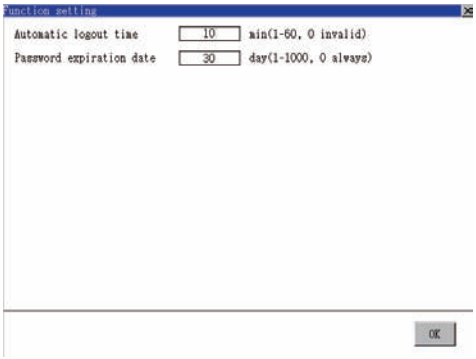
Character types to be input can be changed with touching the following buttons.

A-Z Alphabet capital

a-z Alphabet small letter

0-9 Numeric

When the input is completed, touch the Enter key.

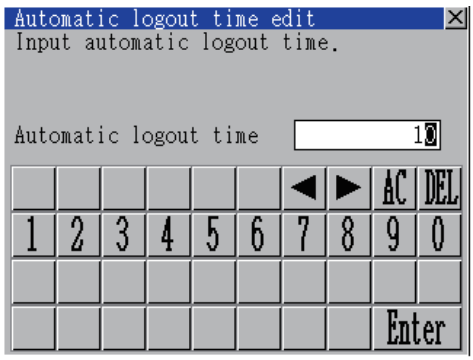


3 When the administrator password is correctly input, the Function setting screen in displayed.

Touch an item to be set.

(a) Automatic logout time

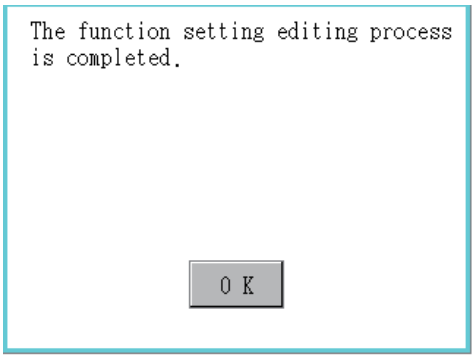
(b) Password expiration date



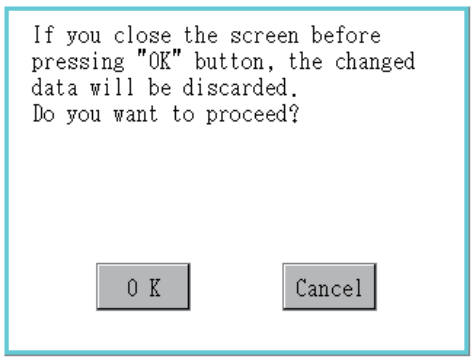
(a) Touch [Automatic logout time], and then the Automatic logout time edit dialog box is displayed.
Input the time.
When the input is completed, touch the Enter key.



(b) Touch [Password expiration date], and then the Password expiration date edit dialog box is displayed. Input the expiration date.
When the input is completed, touch the Enter key.



4 Touch the OK button after all items are input, and then the dialog box shown left is displayed and the input setting is saved.



5 Touch the ⊠ button without touching the OK button, and then the dialog box shown left is displayed.

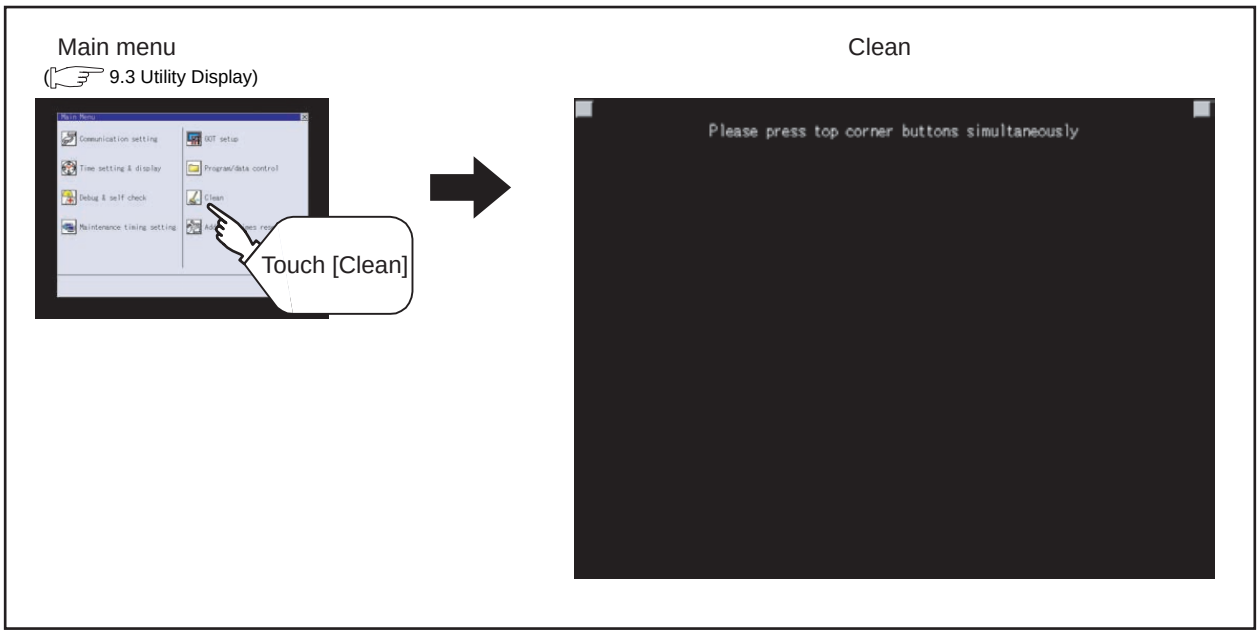
15. CLEANING OF DISPLAY SECTION (CLEAN)

In utility, the screen can be set as not to be effected by touching the screen when clean with clothes. Refer to the below for the cleaning procedure.

☞ 19.3 Cleaning Method

15.1 Clean

15.1.1 Display operation of Clean



Even if touch points other than the upper left corner and upper right corner of the screen, the GOT does not operates.

15.1.2 Operation of Clean

After cleaning the screen, touch the screen following the instruction displayed.
After touching the screen, the screen returns to the Main Menu.

Depending on the GOT to use, either of the following screens is displayed.

- Display pattern 1



- Display pattern 2



16. MAINTENANCE TIME NOTIFICATION SETTING (MAINTENANCE TIMING SETTING)

Energization time, touch count and writing times used as standard for the maintenance time are set.
When use the maintenance timing function, battery and option function board are required.
Refer to the following below for details of battery and option function board.

☞ 8. OPTION

16.1 Maintenance Timing Setting

16.1.1 Function of the maintenance timing setting

When use maintenance time notification function, battery and option function button are required.
When setting the maintenance notifying time, refer to the life descrived in Section 3.2 Performance Specifications as a guide to set time or count.
The maintenance time notification is output by the following two methods.

- Outputs to GOT special register (GS680).
- Outputs as system alarm

For details of the GOT special register and system alarm, refer to the following.

☞ GT Designer2 Version ☐ Screen Design Manual

Point

Switching OFF the maintenance time notification output

The maintenance time notification setting which has been set once is not switched OFF even if changing its setting.

Switch OFF the maintenance time notification by the following methods.

- Execute addition time reset.
- Switch OFF each bit of "maintenance time notification cancel information (GS638)".

Item	Description	Setting range	Unit	Maintenance points Reference page
Backlight maintenance time notification period. (0 to 100000 hour)	Sets energization time for the maintenance notification output. When 0, no message notification. The time is counted only when backlight is lit, in every ten minutes.	0 to 100 <At factory shipment: 0>	1000 hours	18-5
Display section maintenance time notification period (0 to 100000 hour)	Sets energization time for the maintenance notification output. When 0, no message notification. The time is counted only when energized, in every ten minutes.	0 to 100 <At factory shipment: 0>	1000 hours	—
Touch key maintenance time notification count (0 to 2000000times)	Sets touch key touching count for the maintenance notification output. When 0, no message notification. Counts by every screen touch.	0 to 200 <At factory shipment: 0>	10000 times	—
Built-in flash memory maintenance time notification count (0 to 1000000times)	Sets built-in flash memory writing count for the maintenance notification output. When 0, no message notification. Counts by every writing in built-in flash memory.	0 to 200 <At factory shipment: 0>	1000 times	—

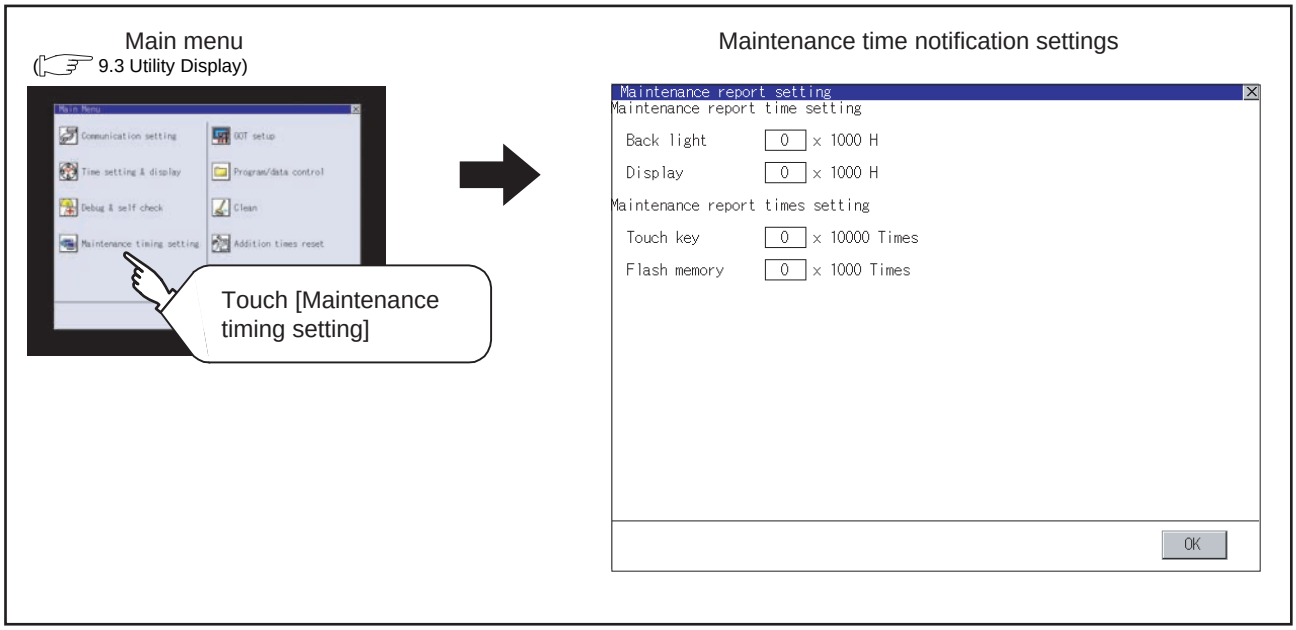
By using system alarm, the message that notifies that the maintenance time is near or it is already maintenance time is displayed.
For the display of the system alarm, refer to the following.

☞ 20. TROUBLESHOOTING

For the display of the system alarm, refer to the following.

☞ GT Designer2 Version ☐ Screen Design Manual

16.1.2 Display operation of maintenance timimg setting



For the addition times as power on addition time, refer to the following.

☞ 17.1 Addition times reset

16.1.3 Operating the maintenance timing setting

1 Touch a select button (item to be set) on the screen.

- Numerical Key: If touched, displays the keyboard in the bottom part of the screen.
  (For keyboard operation, refer Section 9.3.3 Basic operation of settings change page.)

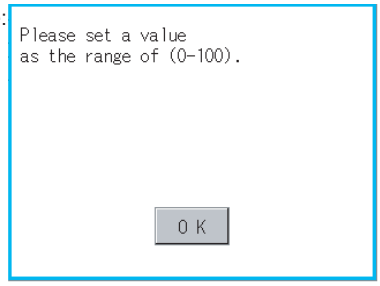


Define the numerical input by Enter.

Remark

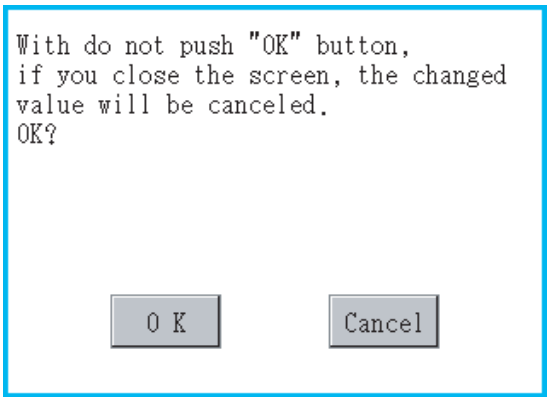
If touch Enter after inputting the value out of the setting range, the alarm message is displayed.

Example:



2 If touch OK button, the settings are reflected.

3 If touch ☒ button instead of touching OK button, the settings are canceled after the dialog below is displayed, and the screen closes.



4 If touch ☒ button, GOT restarts.
After restart, GOT operates with the changed settings.

17. ADDITION TIMES RESET FOR MAINTENANCE TIME NOTIFICATION (ADDITION TIMES RESET)

Displays the present value of Backlight maintenance time notification period, Display section maintenance time notification period, Touch key maintenance time notification count and Built-in flash memory maintenance time notification count which are additioned for the maintenance time notification, respectively and resets these values.
For maintenance time notification setting, refer to the following.

☞ 16.MAINTENANCE TIME NOTIFICATION SETTING (MAINTENANCE TIMING SETTING)

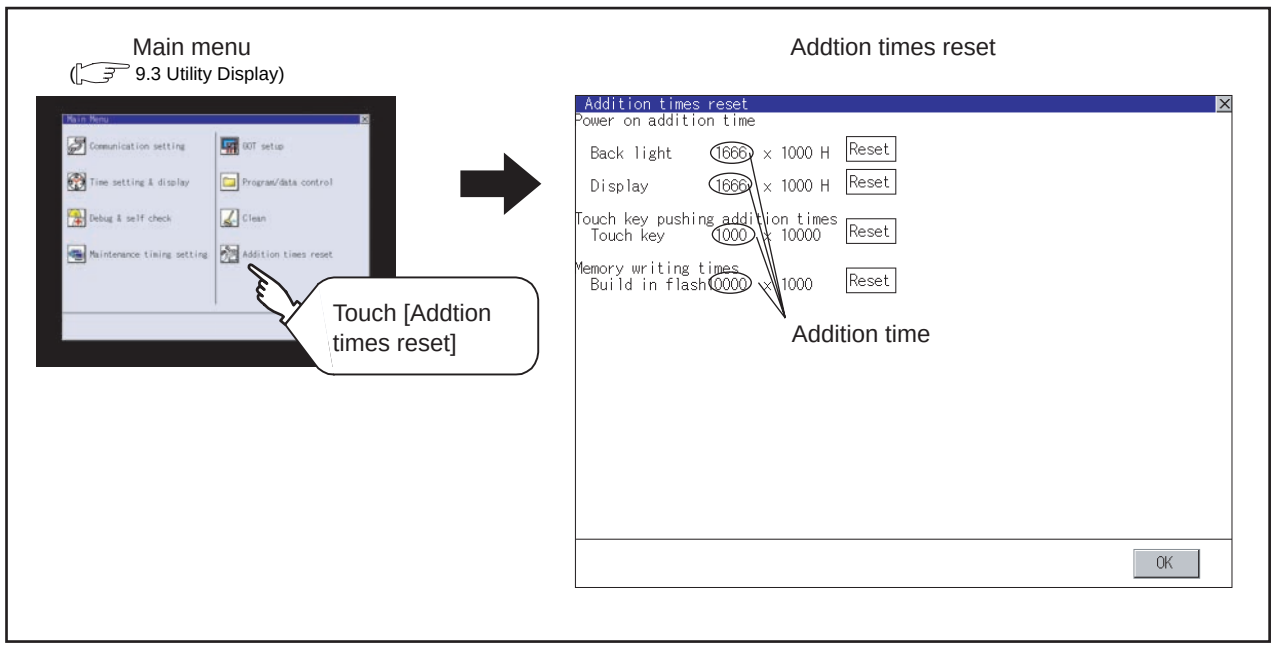
17.1 Addition times reset

17.1.1 Addition times reset function

Resets the value which is additioned by the "16.1.1 Function of the maintenance timing setting" to "0".

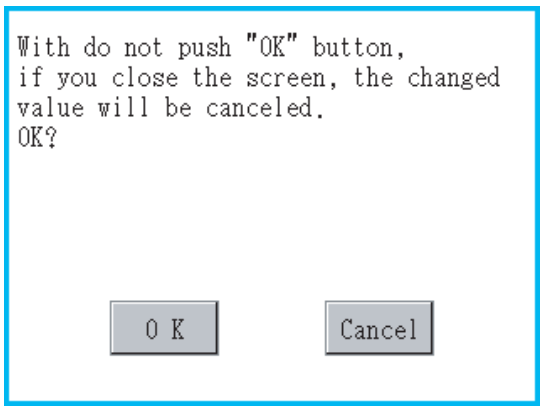
Item	Description
Backlight power on addition time reset	Function to reset the power on addition times to "0".
Display power on addition time reset	Function to reset the power on addition times to "0".
Touch key pushing addition times reset	Function to reset the pushing addition times to "0".
Build in flash memory writing addition times reset	Function to reset the writing addition times to "0".

17.1.2 Display operation of Addition times reset



17.1.3 Operation of Addition times reset

1. If touch [Reset] button of each item, the addition time or the addition count becomes "0".
2. If touch [OK] button, the reset value is reflected.
3. If touch ⊠ button instead of touching [OK] button, the changed contents are canceled after the dialog below is displayed, and the screen closes.



4. Touching the ⊠ button returns the main menu screen.

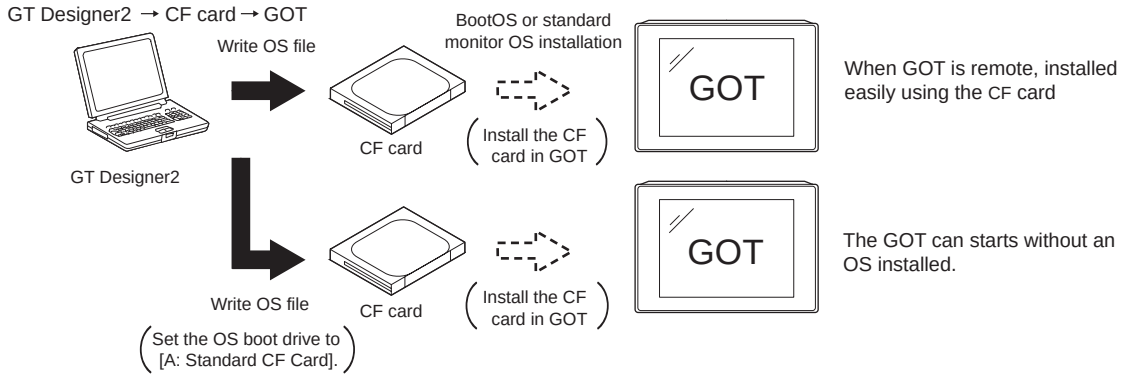
Point

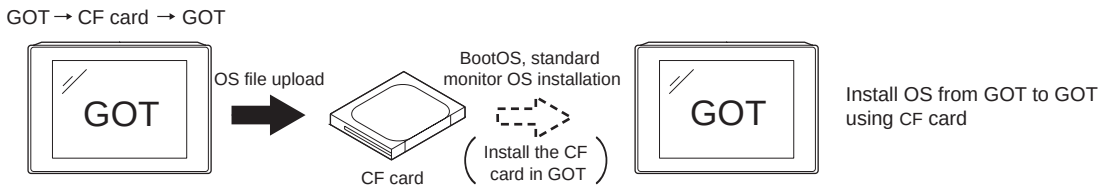
Addition times resetting timing

It is convenient to reset addition times when replace backlight, display section, touch panel or built-in flash memory.

18. INSTALLATION OF COREOS, BOOTOS AND STANDARD MONITOR OS

For executing the GOT utility, install the BootOS and standard monitor OS on the C drive (built-in flash memory) of the GOT, or set the OS boot drive to [A: Standard CF Card] and insert the CF card with OS files into the GOT.
(BootOS is installed in the GOT at factory shipment. It is not necessary to install BootOS when upgrading of it is unnecessary.)
This chapter explains the installation using GOT.





For details of the installation using GT Designer2, refer to the following.

☞ GT Designer2 Version ☐ Basic Operation/Data Transmission Manual

Point CoreOS

In 18.1 to 18.4 of this chapter, only BootOS and standard monitor OS are described.
For CoreOS, refer to the following.

☞ Section 18.5 CoreOS

18.1 BootOS and Standard Monitor OS Required for installation

Under-mentioned BootOS and Standard monitor OS are necessary to execute utility.

<table>
<tr><th>OS name</th><th colspan="2">Function overview</th><th>Storage location</th></tr>
<tr><td>BootOS</td><td colspan="2">Requied for the control of GOT and the communication between PC and GOT.
Installed at factory shipment.
(BootOS can be installed from GT Designer2 or the CF card. When installed from GT Designer2 or the CF card, GOT is initialized to be the factory shipment status. Standard monitor OS must be pre-installed in the GOT when installing the BootOS again.)</td><td>Built-in flash memory
C: \G1BOOT\

CF card that stores data with the OS boot drive set to the A drive
A:\G1BOOT\</td></tr>
<tr><td rowspan="7">Standard monitor OS</td><td>Required for the GOT operation as the monitoring function of GOT, installation and deletion of the OS file or project data, touch key control or display function of the screen and guidance.</td><td rowspan="7">Required for display and operation of the user-created screen and utility screen.
Not installed in GOT at factory shipment.
Install it from GT Designer2 or the memory card.
At installation, select [Mincho] or [Gothic] for the 16-dot standard font.</td><td rowspan="7">Built-in flash memory
C:\G1SYS\

CF card that stores data with the OS boot drive set to the A drive
A:\G1SYS\</td></tr>
<tr><td>System screen data</td></tr>
<tr><td>System screen management information file</td></tr>
<tr><td>TrueType numerical font</td></tr>
<tr><td>12-dot standard font (Gothic)</td></tr>
<tr><td>16-dot standard font (Mincho)</td></tr>
<tr><td>16-dot standard font (Gothic)</td></tr>
</table>

18.2 Prior Preparations for Installing BootOS and Standard Monitor OS

For the installation using GOT, the memory card storing BootOS or standard monitor OS is required.
For the method of writing BootOS and standard monitor OS in the memory card, the following three methods are available.

(1) [To Memory Card] from GT Designer2

☞ GT Designer2 Version □ Basic Operation/Data Transfer Manual

8.9 Transferring Data Using a Memory Card (PC → memory card → GOT)

(2) Uploading from other GOT (BootOS or standard monitor OS has been installed)

☞13. FILE DISPLAY AND COPY (PROGRAM/DATA CONTROL)

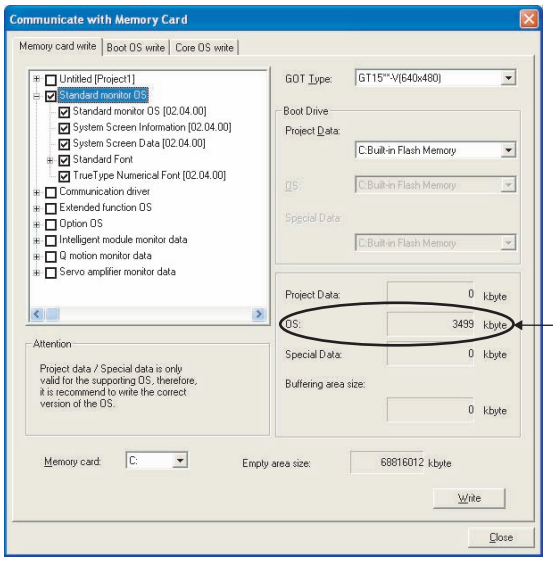
(3) Using CF card that stores data with OS boot drive set to A drive

☞ GT Designer2 Version □ Basic Operation/Data Transfer Manual

Point

Precautions on writing BootOS, standard monitor OS in memory card

When writing BootOS, standard monitor OS, etc. in the memory card, be sure to execute by the utility of other GOT or GT Designer2.
The installation is not executed properly with the memory card to which uploaded from the utility of GOT or copied by softwares other than GT Designer2.
Note the available capacity of the memory card.
The available capacity of BootOS and standard monitor OS can be confirmed by [To Memory Card] of GT Designer2.



Capacity of standard monitor OS

18.3 BootOS and Standard Monitor OS Installation Using Memory Card

There are the following two types for the BootOS,standard monitor OS installation.

(1) Installing when starting the GOT
(☞ 18.3.1)
All the OS and project data stored in the memory card are transferred to the GOT when powering on the GOT. This installing method is effective in the following cases.
- The GOT utility cannot be displayed.
- The standard monitor OS is not installed.

(2) Installing using the Program/Data control function (Utility)
(☞ 18.3.1)
By operating the utility, select OS or project data stored in the memory card and transfer them to the GOT.

Point

Precautions on installing BootOS, standard monitor OS

(1) Installing both BootOS and standard monitor OS
After completing BootOS installation, install standard monitor OS.
When installing BootOS, the built-in flash memory in the GOT is initialized and goes to the status at factory shipment. (All OS and project data are erased.)

BootOS is installed in the GOT at factory shipment. It is not necessary to install BootOS when not upgrading it.

(2) Copying project data using a CF card
After installing BootOS, standard monitor OS, and other OS, download the project data.
At this time, match the version of the standard monitor OS in the GOT with the version of the standard monitor OS with which the project data was created.

(3) When OS and project data are in the CF card (when using GT Designer2)
For a 2-point press installation, after the OS installation is complete, the project data is downloaded.
When installing with the utility, install the OS and download the project data from their respective operation screens.

(4) Installation cannot be interrupted.
Do not perform any of the following during a BootOS or standard monitor OS installation.
Failure to do so may result in installation failure, causing the GOT malfunction.
- Powering off the GOT
- Pressing the reset button of the GOT
- Turning off the CF card access switch of the GOT
- Removing the CF card

If the installation failure and the GOT malfunction occur, take the following action.

- If BootOS installation failed
  Install CoreOS.
  (☞ 18.5.1Installing the CoreOS)
- If standard monitor OS installation failed:
  Install BootOS.
  (☞ 18.3.1Installing when starting the GOT)

18.3.1 Installing when starting the GOT

The displayed message is different depending on the installation condition of standard monitor OS. When the screen requesting operation is displayed, operate the GOT according to the instructions on the screen.

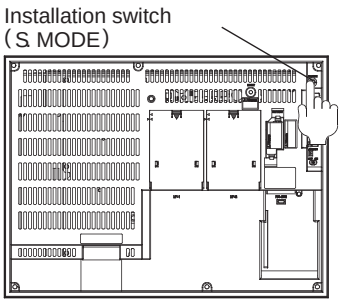
Point

(1) Drives to be used
When installing OS at power-on, use the A drive.
The B drive cannot be used for OS installation at power-on.

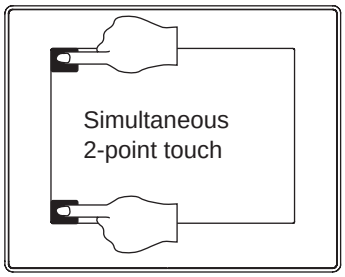
(2) 2-point press installation function
When the CF card that stores data with the OS boot drive set to the A drive is used, the 2-point press installation function is not available.

1 Operation procedure

1. Power OFF GOT and CF card access switch. Insert the CF card in which BootOS, standard monitor OS or project data is stored in the CF card interface of GOT.
2. Switch ON the CF card access switch of GOT.
3. Power on the GOT.
   - For GT1595
     Power on the GOT while pressing the installation switch (S.MODE switch) on the back of the GOT. (1-point press installation function)
   - For GT1585, GT157□, GT156□, GT155□
     Power on the GOT while touching the upper and left of the GOT screen. (2-point presses installation function)

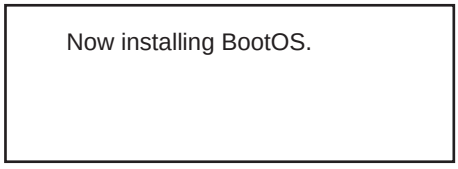


For GT1595

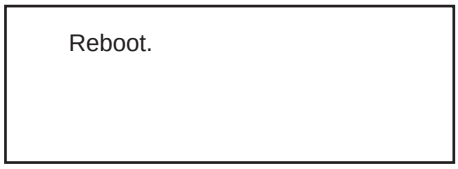


For GT1585, GT157□, GT156□, GT155□

4 BootOS, standard monitor OS is installed in the built-in flash memory.
The CF card access LED is lit during install execution.
Do not pull out the CF card or power OFF the GOT while the CF card access LED is lit.



5 GOT restarts automatically after installation is completed.
(When standard monitor OS is already installed, GOT restarts by touching OK button.)



6 After confirming normal restart, switch OFF the CF card access switch of GOT. When it is confirmed that CF card access LED is not lit, remove the CF card from the CF card interface of GOT.

18.3.2 Installation method using the program/data control function (Utility)

For details of program/data control function, refer to the following.

☞13. FILE DISPLAY AND COPY (PROGRAM/DATA CONTROL)

Point

Precautions on executing program/data control function

When execute program/data control function, standard monitor OS has to be installed in GOT in advance. Thus, this function cannot be used for the initial installation of BootOS, standard monitor OS after purchasing GOT.
Install standard monitor OS by the following two methods.

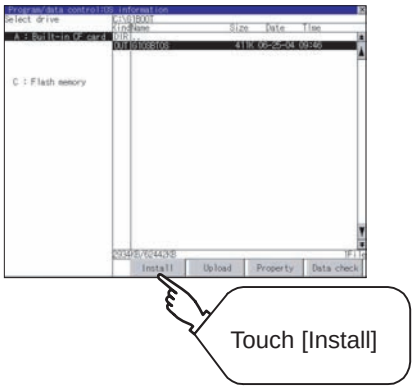
(1) GT Designer2
(2) Installing when starting the GOT

1 Operation procedure

1 Power OFF the GOT. After CF card access LED is off, install the CF card in which BootOS, standard monitor OS or project data is stored in the CF card interface of GOT.

2 Switch ON the CF card access switch of GOT.

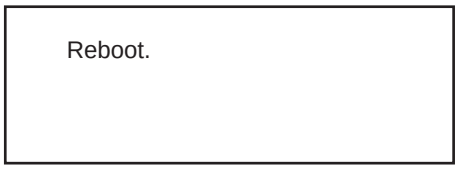
3 Display the program/data control function screen (Utility) on the GOT, and install BootOS, standard monitor OS from the CF card to GOT.



4 CF card access LED is lit during install execution.
Do not pull out the CF card or power OFF the GOT while the CF card access card is lit.



5 GOT restarts automatically after the installation is completed.



6 After confirming that GOT restarted normaly, switch OFF the CF card access switch of GOT. Confirm the CF card access LED is not lit, remove the CF card from the CF card interface of GOT.

18.4 When installing the different version of BootOS, standard monitor OS

(1) BootOS installation

When installing BootOS, GOT compares the version of the BootOS to be installed with the version of BootOS which is already installed.

If the major version of BootOS to be installed is old, execute the following operations to prevent it from being rewritten.

(When installing from GT Designer2, a message is displayed on the personal computer screen. Follow the instructions in that message.)

(a) When only BootOS is stored in the CF card

The message indicating disabled installation is displayed.



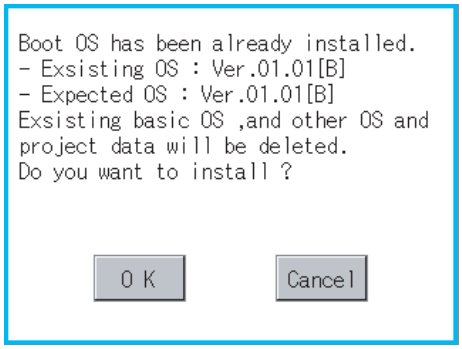
Touch the OK button to cancel installation.

After canceling installation, restart the GOT.

(b) When BootOS, standard monitor OS, and other OS are stored in the CF card

Skip the BootOS installation and install standard monitor OS and other OS.

If the standard monitor OS is already stored on the GOT, the following message is displayed.

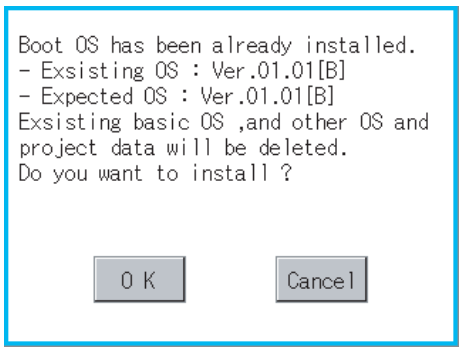


Touching the OK button executes installation.

Touching the Cancel button cancels installation.

After executing or canceling installation, restart the GOT.

(c) When the version is the same or newer regardless of the data stored in the CF card (conditions (a) and (b) above)
The version information and a dialog for selecting whether or not to continue installation are displayed.



<GOT screen when BootOS is installed from memory card.>

If touch [OK] button, installation is executed.

If touch [Cancel] button, installation is canceled.

(2) Standard monitor OS installation
Match the version of each OS file when installing standard monitor OS.
Standard monitor OS cannot be installed if the version of each OS file does not match.

When the installation process is discontinued.

Standard monitor OS	:	1.	O.	O
Communication driver	:	2.	O.	O
Optional function OS	:	2.	O.	O

Please match the number.

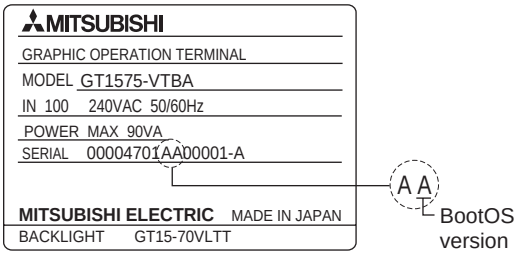
When the installation process is normally executed.

Standard monitor OS	:	2.	O.	O
Communication driver	:	2.	O.	O
Optional function OS	:	2.	O.	O

Point

Checking method of BootOS, standard monitor OS version

1. Check the version of BootOS or standard monitor OS installed in GOT at [OS information] of the utility.
   Refer to the following for details.
   ☞ 13.2 OS Information
2. Check the version of BootOS installed in GOT at product shipment on the rating plate on GOT rear face.



18.5 CoreOS

Install CoreOS only when the GOT will not be the status of factory shipment even when BootOS is installed.
Normally, the CoreOS has not to be installed.

Point

Precautions for installing CoreOS

When executing the CoreOS installation once, it cannot be canceled on the way.
Do not attempt the followings to cancel the installation on the way.
The GOT may not operate.

- Powering the GOT off.
- Pressing the GOT reset button.
  If the GOT does not operate, please consult your local Mitsubishi (Electric System) Service center or representative.

If the GOT does not recover even when installing the CoreOS, the error may be caused by a hardware failure.
Please consult your local Mitsubishi (Electric System) Service center or representative.

18.5.1 Installing the CoreOS

1 Before installing the CoreOS

(1) Installing procedureThe CoreOS can be installed only when using a memory card.
Installation via USB/RS-232/Ethernet is not available.

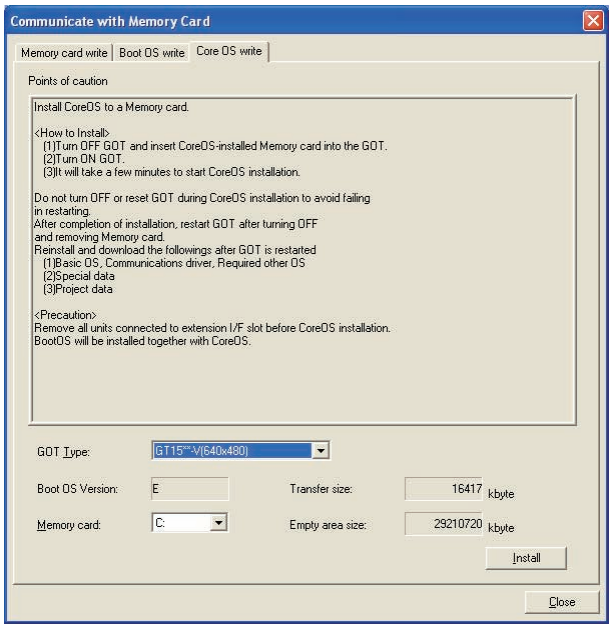
(2) Memory card to be used
Memory card of 32MB or more is required.

(3) Boot OS
When installing the CoreOS, the latest BootOS is also installed automatically.
(Operation by the user is not required.)

2 Installing the CoreOS

1 Write the CoreOS from GT Designer2 to the CF card.
For details of GT Designer2 operation, refer to the following manual.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(8. TRANSFERRING DATA)

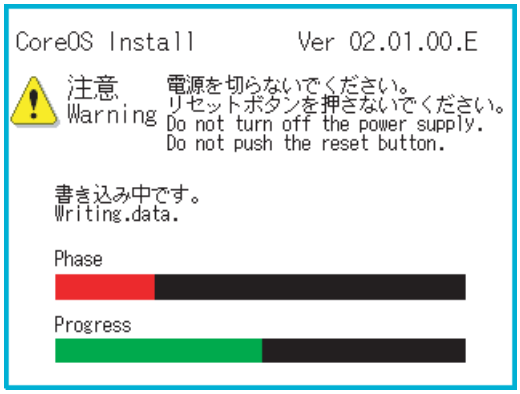


2 After confirming that the GOT is powered off, install the CF card in the GOT.
After installing, switch the CF card access switch on.

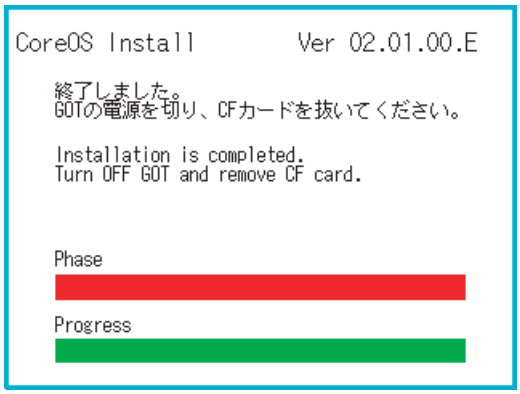
3 Powering the GOT on displays the following screen.
To cancel the installation, power the GOT off and remove the CF card.



4 Turning the CF card access switch off executes Core OS installation.



5 When the installation is completed, the dialog as shown below is displayed.
(The POWER LED of the GOT blinks (green/orange) at the installation completion.)
Confirm that the message is displayed and power the GOT off.



6 Remove the CF card after powering the GOT off.

7 Powering the GOT on again displays the screen as shown below.
(The GOT goes to the status of factory shipment.)
Install OS (Standard monitor OS, communication driver, etc.) or download project data as required.
For how to install each OS or download project data, refer to the following manual.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(8. TRANSFERRING DATA)



18.5.2 When the CoreOS cannot be installed

When the CoreOS cannot be installed, confirm the following item.
If the CoreOS cannot be installed even after checking the following item, the error may be caused by a hardware failure.ss
Please consult your local Mitsubishi (Electric System) Service center or representative.

Error		Action
The CoreOS installation is not executed even when installing the CF card in the GOT.		(1) Check whether the CF card access switch of the GOT is on. If the switch is off, switch it on. (2) The writing from the GT Designer2 to the memory card may not have been completed normally. Execute the writing from the GT Designer2 to the memory card again.
The message is displayed on the GOT	GOT error. Contact your local sales office.	The GOT main unit is broken. Please consult your local Mitsubishi (Electric System) Service center or representative.
	CF card error. Installation will be cancelled. Check whether the CF card can be used.	The CF card is defective. (1) Format the CF card and re-execute. (2) Replace the CF card.
	Optional unit has been connected to extension I/F slot. The optional unit should be removed before starting installation. Installation will be canceled.	Remove the extension unit installed on the GOT.
	GOT type and OS version do not match. Installation will be canceled.	The GOT type selected at [Core OS write] of the GT Designer2 is not correct. Confirm the GOT type and perform [Core OS write] again.
	The version of OS is not acceptable to this GOT. Installation will be canceled. Confirm the version of OS.	Install CoreOS from the latest GT Designer2.
	Memory card access switch is off. Turn on the switch and restart the GOT. Installation will be canceled.	The CF card access switch is off. Turn the switch on and restart the GOT.

19. MAINTENANCE AND INSPECTION

DANGER

- Connect the battery correctly.
  Do not discharge, disassemble, heat, short, solder or throw the battery into the fire.
  These may cause the buttery to burst or fire.
- Do not touch the terminals while the power is on.
  Doing so can cause an electric shock.
- Before starting cleaning or retightening the terminal screws, always switch off the external power supplies used in the system in all phases.
  Cleaning or retightening the terminal screws while the power is on may cause an electric shock.
- Before changing the backlight, always switch off the GOT power externally in all phases (when the GOT is connected to the bus, the PLC CPU power must also be switched off externally in all phases) and remove the GOT from the control panel.
  Not switching off the power in all phases may cause an electric shock.
  Not removing the unit from the control panel can cause injury due to a drop.

CAUTION

- Do not disassemble or modify the unit.
  Doing so can cause a failure, malfunction or fire.
- Do not touch the conductive and electronic parts of the GOT directly.
  Doing so can cause a unit malfunction failure.
- The cables connected to the unit must be run in ducts or clamped.
  Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to GOT, do not hold and pull the cable portion.
  Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Before insert/remove the connection cable, power off the GOT.
  Not doing so can cause a failure or malfunction.
- When replacing the backlight, use the gloves.
  Otherwise, it may cause you to be injured.
- Start changing the backlight more than 5 minutes after switching the GOT power off.
  Not doing so can cause a burn due to the heat of the backlight.
- Do not drop or give an impact to the battery mounted on the unit.
  Doing so can cause the battery to be damaged due to the drop or the impact, making the battery liquid to leak in the battery.
  Do not use but dispose the battery that is dropped or given an impact.
- Before touching the unit, be sure to touch grounded metal or similar objects to discharge the static electricity from human body.
  Not doing so can cause a failure or malfunction of the unit.
- When disposing of the product, handle it as industrial waste.

The GOT does not include consumable components that will cause the shorten life.
However, the battery, liquid crystal screen and backlight have each life length.
It is recommended to replace the battery, backlight periodically.
(For the replacement of the liquid crystal screen, please consult Mitsubishi (Electric System) Service.)
Refer to the following section for the lives of the battery, liquid crystal screen and backlight.

☞ 3.2 Performance Specifications

19.1 Daily Inspection

Daily inspection items

No.	Inspection Item		Inspection Method	Criterion	Action
1	GOT mounting status		Check for loose mounting screws.	Securely mounted	Retighten screws within the specified torque range.
2	Connection status	Loose terminal screws	Retighten screws with screwdriver	Not loose	Retighten terminal screws
		Proximate solderless terminals	Visual check	Proper intervals	Correct
		Loose connectors	Visual check	Not loose	Retighten connector fixing screws
3	Usage status	Dirt on protection sheet	Visual check	Not outstanding	Replace with new one
		Foreign material attachment	Visual check	No foreign matter sticking	Remove clean

Refer to the following for the model names of the protection sheet or the replacement procedure.

☞ 8.12 Protective Sheet

19.2 Periodic Inspection

Yearly or half-yearly inspection items
The following inspection should also be performed when equipment has been moved or modified or the wiring changed.

No.	Inspection Item		Inspection Method	Criterion		Action
1	Surrounding environment	Ambient temperature	Make measurement with thermometer or hygrometer Measure corrosive gas	Display section	0 to 40°C	For use in control panel, temperature inside control panel is ambient temperature
				Other portions	0 to 55°C	
		Ambient humidity		10 to 90%RH		
		Atmosphere		No corrosive gas		
2	GOT with 100-240V AC power	Power supply voltage check	100 to 240VAC Measure voltage across terminals.	85 to 242VAC		Change supply power
	GOT with 24VDC power	Input polarity of 24VDC power	24VDC Measure voltage across terminals.	Left : - Right : +		Change wiring
3	Mounting status	Looseness	Move module	Should be mounted firmly		Retighten screws
		Dirt, foreign matter	Visual check	No dirt, foreign matter sticking		Remove, clean

(Continued to next page)

No.	Inspection Item		Inspection Method	Criterion	Action
4	Connection status	Loose terminal screws	Retighten screws with screwdriver	Not loose	Retighten terminal screws
		Proximate solderless terminals	Visual check	Proper intervals	Correct
		Loose connectors	Visual check	Not loose	Retighten connector fixing screws
5	Battery		Check [GOT internal battery voltage status] in [Time setting & display] of the Utility. (Refer to 13.)	No alarm appears	Replace with new battery when the current battery has reached the specified life span, even if battery voltage low is not displayed.

19.3 Cleaning Method

Use GOT always in a clean condition.
To clean the GOT, wipe the dirty part with a soft cloth using neutral detergent or ethanol.

Clean



Point

Precautions for cleaning

Do not use solvents such as acetone, benzene, toluene and alcohol, since they may cause the protective sheet to be deformed or the dissolvable paint on the surface to peel off.
In addition, do not use spray solvents since they may cause the electrical failure of the GOT and peripheral devices.

19.4 Battery Voltage Low Detection and Battery Replacement

The battery is used for backing up the present time or the maintenance time notification data.
It is recommended that you replace battery periodically.

Refer to the following for the replacement procedure.

☞ 8.11 Battery

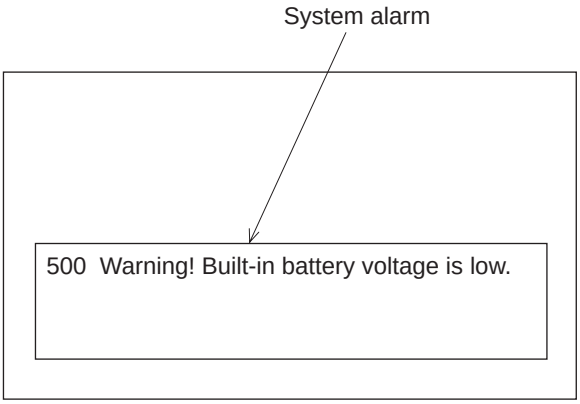
The battery voltage low detection can be confirmed by the utility and system alarm.

Refer to the following for details of the battery status display by the utility.

☞ 12. CLOCK SETTINGS AND BATTERY STATUS DISPLAY (TIME SETTING AND DISPLAY)

By using system alarm, the message that notifies the battery voltage has decreased can be displayed at the battery voltage low on the screen of the GOT.
To display the following message on system alarm, set [Battery alarm display] to "ON".

☞ 11.1.1 Display setting functions



Refer to the following for details of the system alarm display.

☞ GT Designer2 Version□ Screen Design Manual (8. ALARM)

Point

Battery replacement timing

When detecting voltage low, replace the battery immediately.
Data can be saved for 14 days after the battery voltage low detection and cannot be saved after that.

☞ 8.11.4 Battery life

19.5 Backlight Shutoff Detection and Replacement

The backlight is built into GOT for the liquid crystal display.
When GOT detects backlight shutoff, the POWER LED blinks green/orange alternately.
The brightness of the backlight decreases with the lapse of usage period. When backlight shutoff is detected or the display becomes unclear, replace the backlight.
When replace the backlight, refer to "19.6 Backlight Replacement".

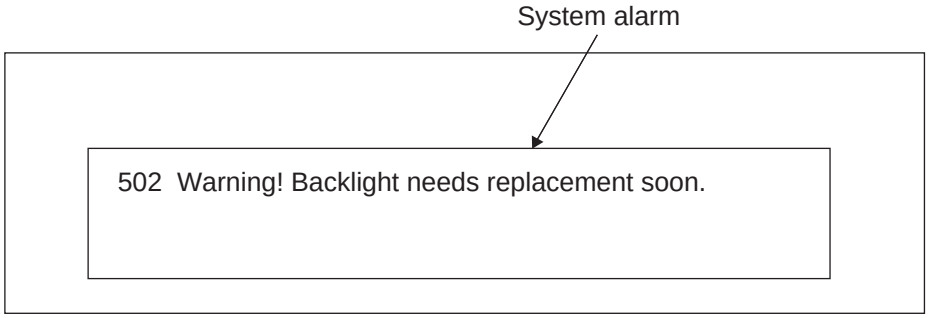
(1) Life of backlight
The usable duration of backlight can be extended by setting to [Screen saving backlight off] in the utility of GOT (GOT set up).
Refer to the following for details.

☞ 11. DISPLAY AND OPERATION SETTINGS (GOT SET UP)

(2) Replacement time of backlight
The backlight replacement time can be set by the utility of GOT (Maintenance timing setting) with reference to the life of backlight.
Refer to the following for details.

☞ 16. MAINTENANCE TIME NOTIFICATION SETTING (MAINTENANCE TIMING SETTING)

Moreover, when system alarm is used, the message that notifies of the backlight replacement time can be displayed on the GOT screen.



Refer to the following for the system alarm display.

☞ GT Designer2 Version□ Screen Design Manual (8. ALARM)

Point Precautions for the backlight shutoff status

In the backlight shutoff status, the touch key operates.
Early replacement of backlight is recommended.

19.6 Backlight Replacement

This section explains the backlight replacing methods.

19.6.1 Applicable backlight

The following backlights are applicable for GT15□□.

Model name	Description	Target GOT
GT15-90XLTT	For 15" high intensity, wide angle view TFT (XGA)	GT1595-X
GT15-80SLTT	For 12.1" high intensity, wide angle view TFT (SVGA)	GT1585V-S, GT1585-S
GT15-70SLTT	For 10.4" high intensity, wide angle view TFT (SVGA)	GT1575-S (Function version B or earlier)*1
GT15-70VLTT	For 10.4" high intensity, wide angle view TFT (SVGA, VGA)	GT1575V-S (Function version C or later)*1, GT1575-V
GT15-70VLTN	For 10.4" TFT (VGA)	GT1575-VN, GT1572-VN
GT15-60VLTT	For 8.4" high intensity, wide angle view TFT (VGA)	GT1565-V
GT15-60VLTN	For 8.4" TFT (VGA)	GT1562-VN

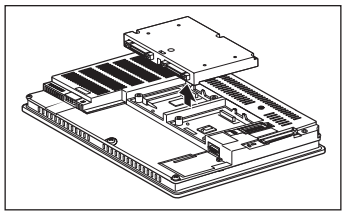
*1 For how to check the function version, refer to the following.

☞ Appendix 2 Confirming of Versions and Conformed Standards

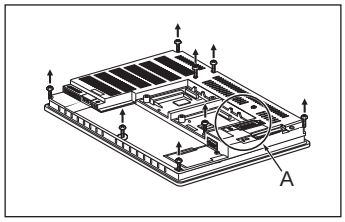
19.6.2 Replacement procedure of backlight

1 For GT15-90XLTT

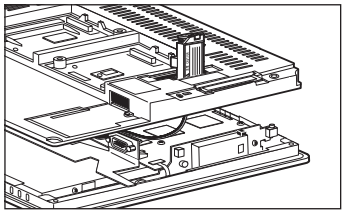
1. Power off the GOT.
2. Disconnect the power supply cable and communication cable.
   Remove the GOT from the control panel.
3. Remove the extension unit cover on the right side of the GOT.
   When extension units, including bus connection units, are mounted on the GOT, remove the units.

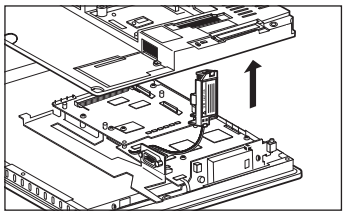


4. Remove the GOT rear fixing screws (8 pcs.) with a screwdriver.

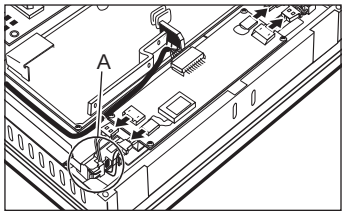


5 Remove the case after passing the battery holder through the mounting hole.
When removing, take care of not cutting the cable of the battery holder.
(Expanded figure of part A in 4)

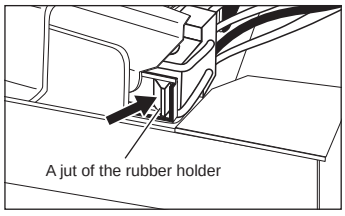


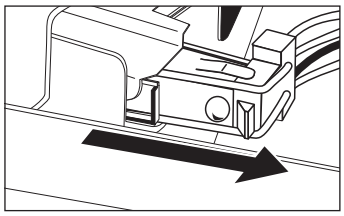


6 Disconnect the cable connector of the upper (H01) backlight and the cable connector of the lower (H02) backlight from the GOT side connectors.

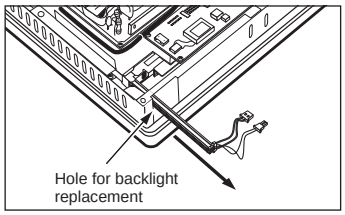


7 Pull the upper backlight by pressing the projecting part of the rubber holder that fixes the backlight with a minus driver to unfasten the backlight.
In the same way, pull the lower backlight by pressing the projection part of the rubber holder that fixes the backlight with a minus driver to unfasten it.
(Expanded figure of part A in 6)





8 Pull the upper backlight out through the hole for backlight replacement on the upper part of the GOT.
In the same way, pull the lower backlight out through the hole for backlight replacement on the lower part of the GOT.



9 Mount a new backlight in the reverse procedure of removal.
When inserting a new backlight through the hole for backlight replacement of the GOT main unit, take care not to damage the sheath of the cable.
And push the backlight in securely until the projection part of the rubber holder is fixed.

Also assemble the case in the reverse procedure of disassembly. (Tighten the GOT rear fixing screws within the torque range of 0.36 to 0.48N·m).
When mounting the case, take care of not biting the cables between the case and the GOT.

2 For GT15-80SLTT, GT15-70SLTT, GT15-70VLTT, GT15-70VLTN

Backlight replacement varies with the hardware version of the applicable GOT.
Before replacement, please confirm the hardware version.

(☞ Appendix 2 Confirming of Versions and Conformed Standards)

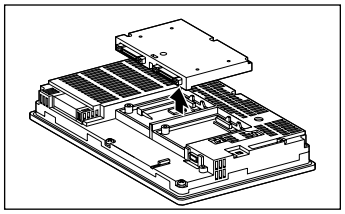
Type	Hardware version	Reference
GT1585V-STBA	A (March, 2006) or later	(1) Replacement procedure 1
GT1585V-STBD	A (May, 2006) or later	(1) Replacement procedure 1
GT1585-STBA	B (April, 2005) or earlier	(2) Replacement procedure 2
	C (March, 2005) or later	(1) Replacement procedure 1
GT1585-STBD	A (Jul, 2005) or later	(1) Replacement procedure 1
GT1575V-STBA	A (March, 2006) or later	(1) Replacement procedure 1
GT1575V-STBD	A (May, 2005) or later	(1) Replacement procedure 1
GT1575-STBA	B (April, 2005) or earlier	(2) Replacement procedure 2
	C (March, 2005) or later	(1) Replacement procedure 1
GT1575-STBD	A (Jul, 2005) or later	(1) Replacement procedure 1
GT1575-VTBA	D (April, 2005) or earlier	(2) Replacement procedure 2
	E (March, 2005) or later	(1) Replacement procedure 1
GT1575-VTBD	A (Jul, 2005) or later	(1) Replacement procedure 1
GT1575-VNBA	A (Sep, 2005) or later	(1) Replacement procedure 1
GT1575-VNBD	A (Sep, 2005) or later	(1) Replacement procedure 1
GT1572-VNBA	A (Sep, 2005) or later	(1) Replacement procedure 1
GT1572-VNBD	A (Sep, 2005) or later	(1) Replacement procedure 1

(1) Replacement 1

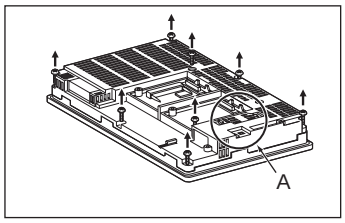
1 Power off the GOT.

2 Disconnect the power supply cable and communication cable.
Remove the GOT from the control panel.

3 Remove the extension unit cover from the right side of the GOT.
Remove the extension unit, e.g. bus connection unit, if it is mounted.

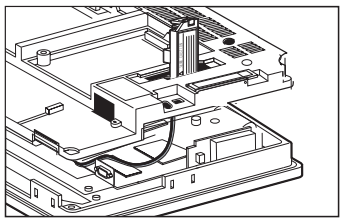


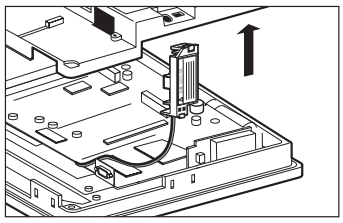
4 Remove the GOT rear fixing screws (8 pcs.) with a screwdriver.



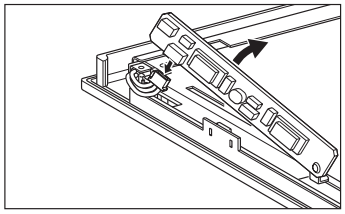
5 Remove the case after passing the battery holder through the mounting hole. When removing, take care of not cutting the cable of the battery holder.

(Expanded figure of part A in 4)



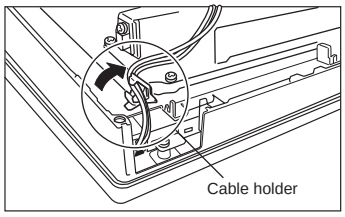


6 Pull up the backlight drive board, and disconnect the cable connector of the backlight from the connector of the backlight drive board.



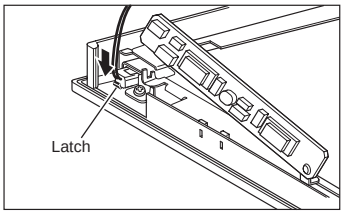
When replacing GT15-80SLTT, remove the cable from the cable holder.

(When replacing GT15-80SLTT)

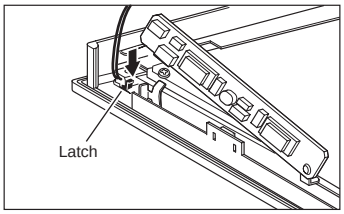


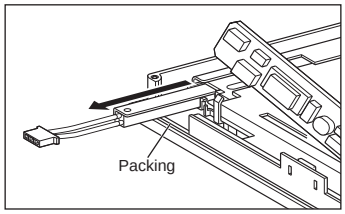
7 Press the backlight fixing latch (black) with your finger, and pull out the backlight to the left.
When pulling the backlight, press the packing with your finger so that the backlight will not be hit with the packing.

(When replacing GT15-80SLTT)



(When replacing GT15-70SLTT, GT15-70VLTT or GT15-70VLTN)





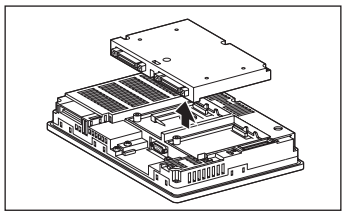
8 Mount a new backlight in the reverse procedure of removal.
Also assemble the case in the reverse procedure of disassembly.
(Tighten the GOT rear fixing screws within the torque range of 0.36 to 0.48 N·m).
When mounting the case, take care of not biting the cables between the case and the GOT.

(2) Replacement 2

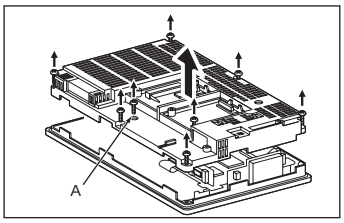
1 Power off the GOT.

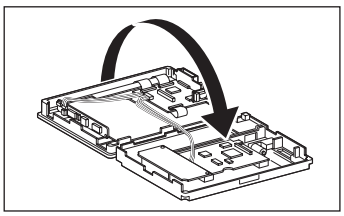
2 Disconnect the power supply cable and communication cable.
Remove the GOT from the control panel.

3 Remove the extension unit cover from the right side of the GOT.
Remove the extension unit, e.g. bus connection unit, if it is mounted.

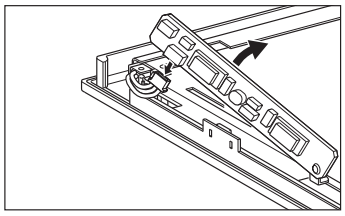


4 Remove the GOT rear fixing screws (8 pcs.) with a screwdriver, and remove the case.
Screw A must be tighten in the torque range of 0.186 to 0.245 N·m, as it is made of plastic.



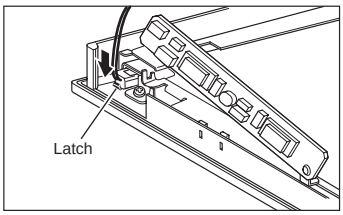


5 Pull up the backlight drive board, and disconnect the cable connector of the backlight from the connector of the backlight drive board.

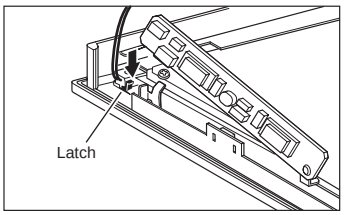


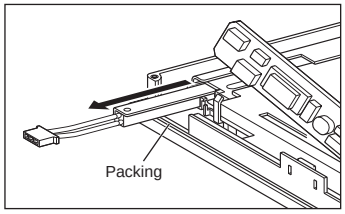
6 Press the backlight fixing latch (black) with your finger, and pull out the backlight to the left.
When pulling the backlight, press the packing with your finger so that the backlight will not be hit with the packing.

(When replacing GT15-80SLTT)



(When replacing GT15-70SLTT, GT15-70VLTT or GT15-70VLTN)





7 Mount a new backlight in the reverse procedure of removal.
Also assemble the case in the reverse procedure of disassembly.
(Tighten the GOT rear fixing screws within the following torque range:
Screw A: 0.186 to 0.245 N·m, Other screws: 0.36 to 0.48 N·m).
When mounting the case, take care of not biting the cables between the case and the GOT.

3 For GT15-60VLTT or GT15-60VLTN

Backlight replacement varies with the hardware version of the applicable GOT.
Before replacement, please confirm the hardware version.

(☞ Appendix 2 Confirming of Versions and Conformed Standards)

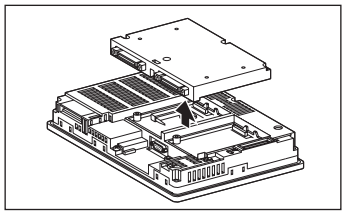
Type	Hardware version	Reference
GT1565-VTBA	D (April, 2005) or earlier	(2) Replacement procedure 2
	E (March, 2005) or later	(1) Replacement procedure 1
GT1565-VTBD	A (Jul, 2005) or later	(1) Replacement procedure 1
GT1562-VNBA	A (Sep, 2005) or later	(3) Replacement procedure 3
GT1562-VNBD	A (Sep, 2005) or later	(3) Replacement procedure 3

(1) Replacement 1

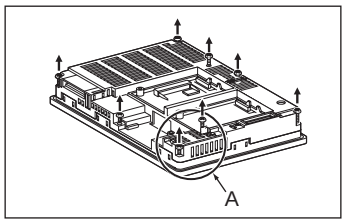
1 Power off the GOT.

2 Disconnect the power supply cable and communication cable.
Remove the GOT from the control panel.

3 Remove the extension unit cover on the right side of the GOT.
Remove the extension unit, e.g. bus connection unit, if it is mounted.

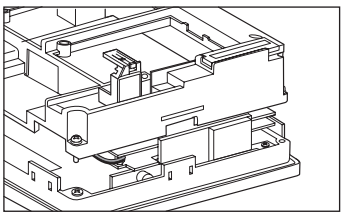


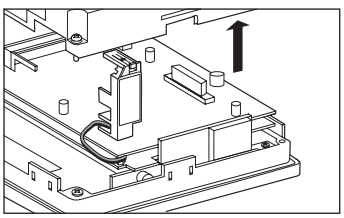
4 Remove the GOT rear fixing screws (8 pcs.) with a screwdriver.



5 Remove the case after passing the battery holder through the mounting hole.When removing, take care of not cutting the cable of the battery holder.

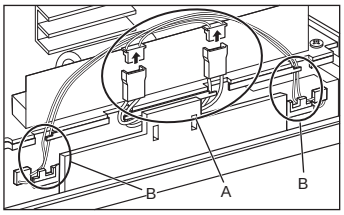
(Expanded figure of part A in 4)

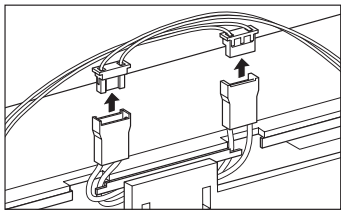




6 Disconnect the cable connector of the upper (H01) backlight and the cable connector of the lower (H02) backlight from the GOT side connectors.

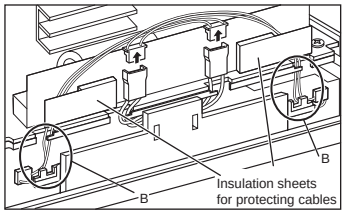
(Expanded figure of part A in 6)





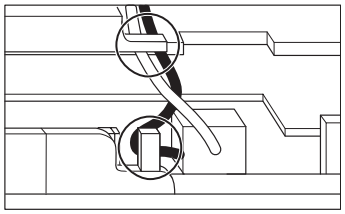
When the GOTs with the following hardware versions are used, remove the cables from the insulation sheets for protecting cables.

- GT1565-VTBA(Hardwear version W or later)
- GT1565-VTBD(Hardwear version N or later)

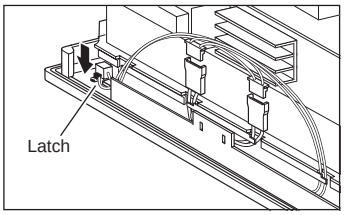


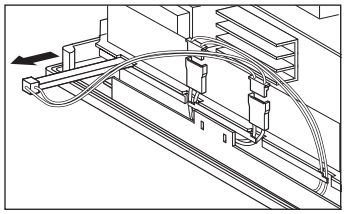
7 Remove the cables of the upper connector (H01) from the 2 slits (black).
Similarly, remove the cables of the upper connector (H02) from the 2 slits (black).

(Expanded figure of part B in 6)



8 Press the upper backlight fixing latch (black) with your finger, and pull out the backlight to the left.
Similarly, press the lower backlight fixing latch (black) with your finger, and pull out the backlight to the left.



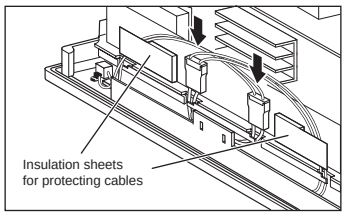


9 Mount a new backlight in the reverse procedure of removal.

When the GOT with the insulation sheets for protecting cables is used, place the cables between the insulation sheet and the insulation sheets for protecting cables.

When connecting the cable connectors of the backlight and the GOT unit, connect by crossing the cable connectors each other as the below.

The following figure shows an example with the insulation sheets for protecting cables.



Also assemble the case in the reverse procedure of disassembly. (Tighten the GOT rear fixing screws within the torque range of 0.36 to 0.48N·m).

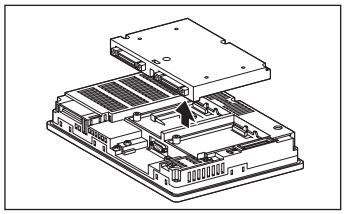
When mounting the case, take care of not biting the cables between the case and the GOT.

(2) Replacement 2

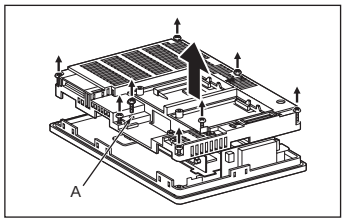
1 Power off the GOT.

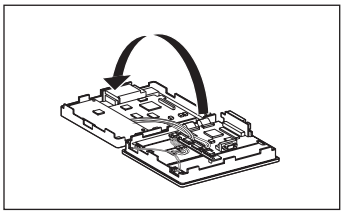
2 Disconnect the power supply cable and communication cable.
Remove the GOT from the control panel.

3 Remove the extension unit cover on the right side of the GOT.
Remove the extension unit, e.g. bus connection unit, if it is mounted.

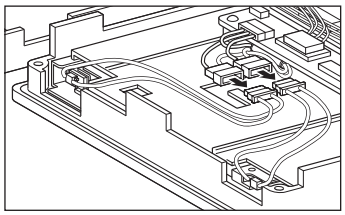


4 Remove the GOT rear fixing screws (8 pcs.) with a screwdriver, and remove the case.
Screw A must be tighten in the torque range of 0.186 to 0.245 N·m, as it is made of plastic.

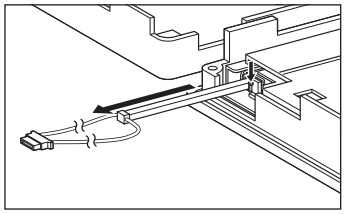




5 Disconnect the cable connector of the upper (H01) backlight and the cable connector of the lower (H02) backlight from the GOT side connectors.



6 Press the upper backlight fixing latch (black) with your finger, and pull out the backlight to the left.
Similarly, press the lower backlight fixing latch (black) with your finger, and pull out the backlight to the left.



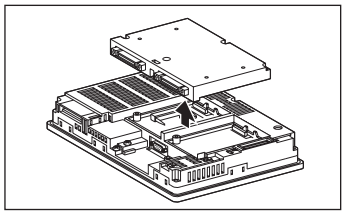
7 Mount a new backlight in the reverse procedure of removal.
Also assemble the case in the reverse procedure of disassembly. (Tighten the GOT rear fixing screws within the following torque range: Screw A: 0.186 to 0.245 N·m, Other screws: 0.36 to 0.48N·m.)
When mounting the case, take care of not biting the cables between the case and the GOT.

(3) Replacement 3

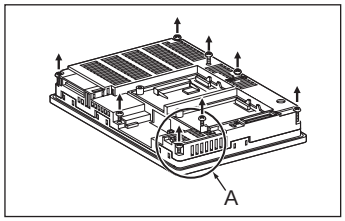
1 Power off the GOT

2 Disconnect the power supply cable and communication cable.
Remove the GOT from the control panel.

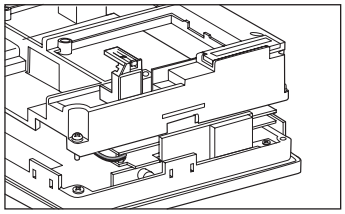
3 Remove the extension unit cover on the right side of the GOT.
Remove the extension unit, e.g. bus connection unit, if it is mounted.

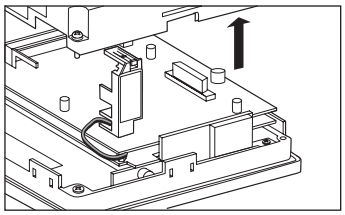


4 Remove the GOT rear fixing screws (8 pcs.) with a screwdriver.

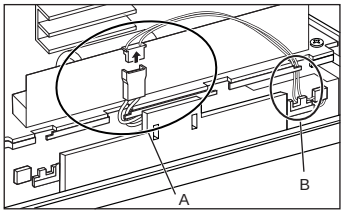


5 Remove the case after passing the battery holder through the mounting hole. When removing, take care of not cutting the cable of the battery holder.
(Expanded figure of part A in (4))

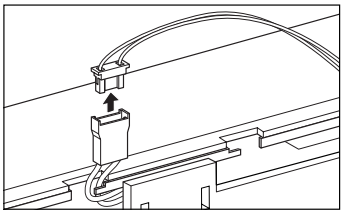




6 Disconnect the cable connector of the backlight from the GOT side connector.

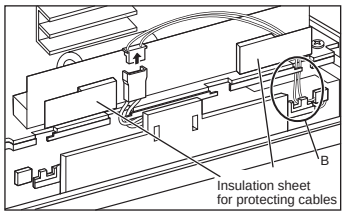


(Expanded figure of part A in 6)

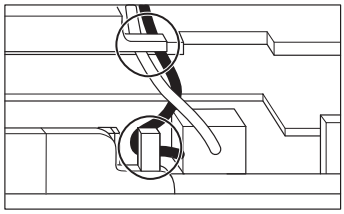


When the GOTs with the following hardware versions are used, remove the cable from an insulation sheet for protecting cables.

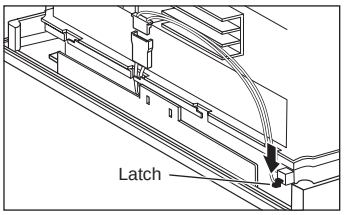
- GT1562-VNBA (Hardware version S or later)
- GT1562-VNBD (Hardware version K or later)

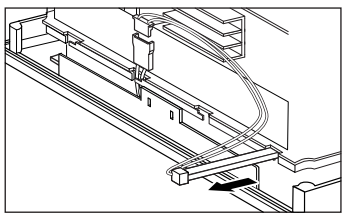


7 Remove the cables from the 2 slits (black).
(Expanded figure of part B in (6))

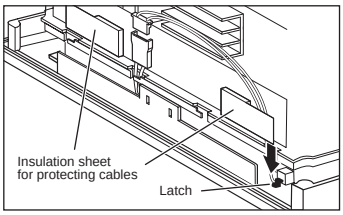


8 Press the backlight fixing latch (black) with your finger, and pull out the backlight to the left.





9 Mount a new backlight in the reverse procedure of removal.
When the GOT with the insulation sheets for protecting cables is used, place the cable between the insulation sheet and an insulation sheet for protecting cables.
When connecting the cable connector of the backlight to the GOT side connector, connect it as shown below.
The following figure shows an example with the insulation sheets for protecting cables.



Also attach the case in the reverse procedure of removal. (Tighten the GOT rear fixing screws within the torque range of 0.36 to 0.48N·m).
When attaching the case, take care of not biting the cables between the case and the GOT.

20. TROUBLESHOOTING

This chapter explains the GOT restoration sheet, troubleshooting in the bus connection, and the error message/system alarm list.

20.1 GOT Restoration Sheet

This section provides restoration methods for the case the GOT does not operate normally, which are listed in check sheets.
The following explains how to use each sheet.

(1) When the GOT does not operate or malfunctions (GOT status check sheet)

When the GOT does not operate or malfunctions, identify the cause of the malfunction etc. with 1 GOT status check sheet and take corrective action.
When the GOT is restored, see the status for a while.

(2) When the wiring status needs to be improved (GOT installation status check sheet)
When the noise caused by the GOT wiring status is considered to have caused the malfunction, etc. based on the check result of (1) above, take corrective action for wiring using 2 GOT installation status check sheet.
When the GOT is restored, see the status for a while.

(3) When corrective action other than (1) and (2) above is required (System configuration check sheet)
If malfunction etc. occurs even after checking with (1) and (2) above, please contact your local Mitsubishi (Electric System) Service after filling out 3 System configuration check sheet with details about your system.

When sending a troubled product, attach the GOT restoration sheets (1 GOT status check sheet, 2 GOT installation status check sheet, 3 System configuration check sheet) checked in this section.
Please keep copies of the restoration sheets.

1 GOT status check sheet

Check the GOT starting from (1) GOT status.
Proceed as instructed by "Action".

(1) Status of the GOT

Phenomenon	Cause/status	Action
(a) Frequency when the GOT does not operate, an error occurs on the screen, etc.		
☐ Occurs always. ☐ Occurs sometimes.	Occurrence frequency: ( ) Example: Once a month	Proceed to (1)-(b).
(b) Checking of the displayed error code (system alarm)		
☐ Can be checked.	Error code (system alarm): ( ) Example: 460 Communication unit error	Take the action for the error code (system alarm) or error message checked. If the status does not change after the action is taken, proceed to (1)-(c).
☐ Cannot be checked.		Proceed to (1)-(c).
(c) POWER LED		
☐ Lit in green	The power is supplied normally.	Proceed to (1)-(d).
☐ Lit in orange	Screen saving is being performed. The read device of the system information may have been turned ON when the device was set, and the screen was switched to the forced screen saving status.	Check the setting of the read device. When no problem is found in the setting, proceed to (1)-(d).
☐ Blinks in green/orange	The backlight has run out.	Replace the backlight. If the GOT is not restored, proceed to (1)-(d).
☐ Not lit	The power is not supplied.	Check if the power is supplied. If the GOT is not restored, proceed to (5) Troubled product investigation.
	When the power is supplied, the GOT hardware may be faulty.	

Phenomenon	Cause/status	Action
(d) Screen display		
☐ The screen is completely black.	The LCD or BootOS may be failty.	Perform the following in order. 1) Reinstalling BootOS 2) Reinstalling standard monitor OS If the GOT is not restored by 1) and 2), perform the following. 3) Reinstalling CoreOS and then standard monitor OS If the GOT is not restored by the above operations, proceed to (5) Troubled product investigation.
☐ The screen is completely white.	The GOT hardware may be faulty.	Proceed to (5) Troubled product investigation.
☐ A line is displayed on the screen. *1	The GOT hardware may be faulty. Example: A vertical line is displayed. 	Proceed to (5) Troubled product investigation.
☐ Other faulty displays		
☐ The screen freezes.	The screen display is not updated and any operation is not allowed.	Proceed to (1)-(e).
(e) Buzzer sound		
☐ Does not sound.	Buzzer sound: ( ) Example: The rhythm as three beeps, one beep, and then two beeps is repeated.	Proceed to (2) Status of the GOT when it freezes.
☐ Continues to beep randomly.		
☐ Continues to beep in a particular pattern.		
☐ Beeps continuously.	The read device of the system information may have turned ON when the device was set, turning ON the Buzzer output signal.	Check the setting of the read device. When the Buzzer output signal has no error, proceed to (2) Status of the GOT when it freezes.

*1 For models using STN monochrome LCDs, unintended lines may be seen flowing from the displayed line. Note that this phenomenon is a feature of the product, not a defect or fault.

(2) Status of the GOT when it freezes (screen operation stopped)

Phenomenon	Cause/status	Action
(a) Switching to the utility		
☐ Enabled	Error code (system alarm): ( ) Example: 460 Communication unit error	When the system alarm display function can be used, take the action for the error code (system alarm) displayed. If the action cannot be taken, proceed to (2)-(b).
☐ Disabled	The system alarm display function cannot be used.	Proceed to (2)-(c).
(b) Executing of I/O check from the GOT utility		
☐ Communication error	Display details: ( ) Example: A message indicating the cause may be a connection error was displayed.	Proceed to (2)-(c).
☐ No error	The hardware such as a communication interface has no error.	Proceed to (3) Status of the PLC CPU.
(c) Objects not displayed on the monitor screen		
☐ Found	Details: ( ) Example: The numerical display object is not displayed.	Proceed to (3) Status of the PLC CPU.
☐ Not found		

(3) Status of the PLC CPU

Phenomenon	Cause/status	Action
(a) PLC failure		
☐ Occurs always.	An error such as CONTROL-BUS. ERROR or SP. UNIT LAY. ERROR may have occurred. Error code (system alarm): ( ) Example: 1204 CPU H/W fault	Proceed to the following. ☞ 20.2 Troubleshooting in Bus Connection
☐ Occurs sometimes.	The PLC CPU may be influenced by noise or the hardware may be faulty. Occurrence frequency: ( ) Example: Once a month Error code (system alarm): ( ) Example: 1204 CPU H/W fault	Proceed to (4) GOT restoration procedure.
☐ Operates normally.	—	

(4) GOT restoration procedure

Follow the procedures below starting from (a) and in order to check if the GOT is restored.
If the GOT is not restored, proceed to the next item.

Check item	Cause	Action
(a) Press the GOT reset switch. *1, 3 ☐ Restored ☐ Not restored (Proceed to (b).)	The GOT may have malfunctioned temporarily due to noise.	Take the action of (4)-(h).
(b) Power the GOT ON/OFF. *2, 3 ☐ Restored ☐ Not restored (Proceed to (c).)		
(c) Reset or power ON/OFF the PLC CPU. ☐ Restored ☐ Not restored (Proceed to (d).)		
(d) Power the GOT and PLC CPU ON/OFF simultaneously. ☐ Restored ☐ Not restored (Proceed to (e).)		
(e) Connect the cable again. ☐ Restored ☐ Not restored (Proceed to (f).)	The cable connection may be faulty.	Securely connect the cable. If an error occurs again, proceed to (5) Troubled product investigation.
(f) Reinstall the project data. ☐ Restored ☐ Not restored (Proceed to (g).)	Data may have been destroyed by an action such as powering the GOT OFF during the installation of project data or OS.	Do not power the GOT OFF while transferring data. If an error occurs again, proceed to (5) Troubled product investigation.
(g) Reinstall the OS. ☐ Restored ☐ Not restored (Proceed to (h).)		
(h) Take the action described in the "Action" column. ☐ Restored ☐ Not restored (Proceed to (i).)	The GOT may have malfunctioned temporarily due to noise.	Take the action with referring to 2 GOT installation status check sheet.
(i) Replace the unit/module. ☐ Restored ☐ Not restored	The hardware of the unit/module may be faulty.	Install the unit/module with which the GOT malfunctioned again to see if the unit/module caused the malfunction. After checking, proceed to (5) Troubled product investigation.
☐ The GOT is not restored even by performing (a) to (i).	—	Proceed to (5) Troubled product investigation.

*1: The GOT reset switch does not operate when the bus connection is used.

*2: When the bus connection is used, do not power the GOT ON again (OFF→ON) while the power of the PLC is ON.

When powering the GOT ON again (OFF→ON), power OFF the PLC before that.

*3: By powering OFF the GOT, an error occurs in the control station when the MELSECNET/H or MELSECNET/10 connection is used or in the master station when the CC-Link connection (intelligent device station) is used.

(5) Troubled product investigation

When malfunction of the GOT is not improved, please contact your local Mitsubishi (Electric System) Service.

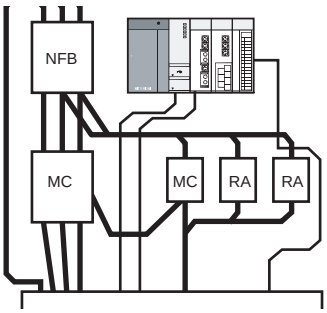
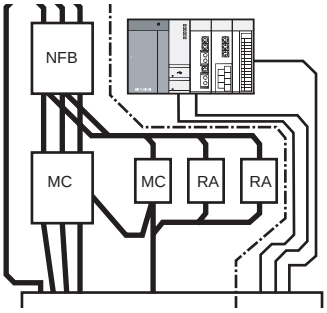
Depending on the problem details, we may ask you to return the troubled product to us.

In that case, please attach the GOT status check sheet, GOT installation status check sheet, and the system configuration check sheet filled out with details of your system.

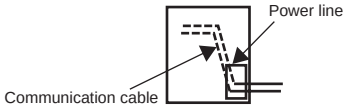
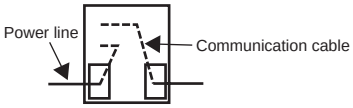
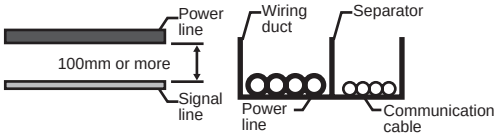
2 GOT installation status check sheet

Check the current installation status of the GOT you are using against the GOT installation status described in the upper column of items (1) to (7).
When the measure described in the lower column is needed, take the measure for the current status.
When the measure is taken, check the result, "Effective" or "Ineffective".

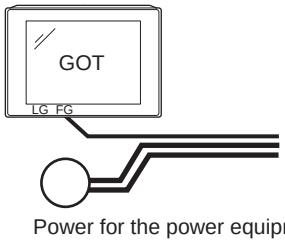
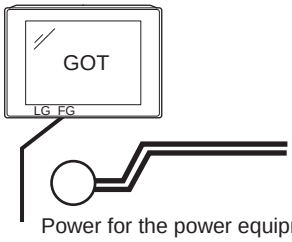
(1) Panel inside wiring

Current status		The power line connected to the power or servo amplifier and the communication cable such as bus connection cable or network cable are mixed in the duct.	☐ Mixed ☐ Not mixed
Measure for the cables mixed		Wiring the power line and communication cable in the panel without mixing them in the duct can reduce the influence of noise.	☐ Effective ☐ Ineffective

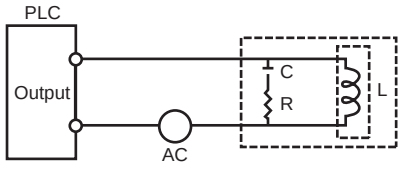
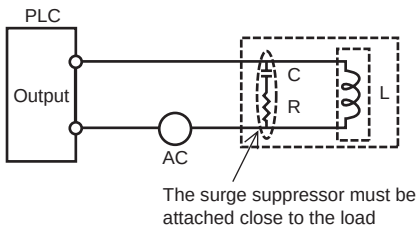
(2) Panel outside wiring

Current status		The power line and communication cable are installed together.	☐ Installed together ☐ Not installed together
Measure for the cables installed together Fig. A Fig. B	 	Leading the power line and communication cable outside the panel at separate places can make the communication cable less influenced by noise from the power line. Installing the communication cable apart from the power line or using a separator (made of metal) in the duct as shown in Fig. B can make the communication cable less influenced by noise.	☐ Effective ☐ Ineffective

(3) Wiring of GOT's FG cable and power line

Current status		The FG cable and power line of the GOT are installed together.	☐ Installed together ☐ Not installed together
Measure for the cables installed together		Separating the FG cable and power line of the GOT in wiring reduces the influence of noise.	☐ Effective ☐ Ineffective

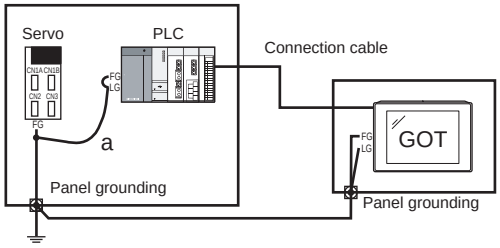
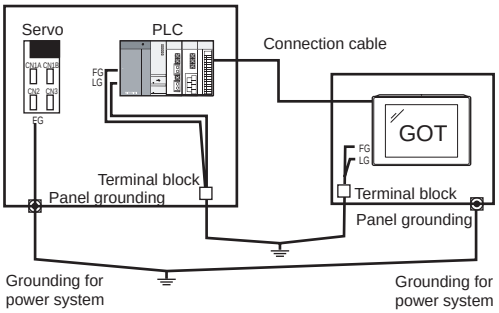
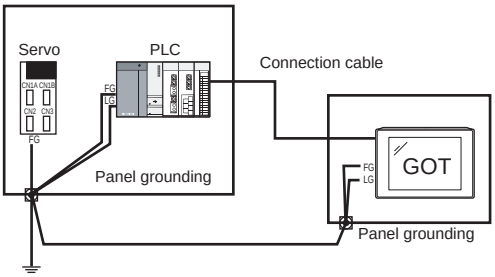
(4) Surge measures

Current status		A surge suppressor is used for the wiring of the load such as MCCB, electromagnetic contactor, relay, solenoid valve, or induction motor. (When a surge suppressor is used, fill out the entry area below with the surge suppressor model name and the name of the equipment for which the surge suppressor is used.)	☐ Used ☐ Not used
Measure for the equipment without a surge suppressor used		Attaching the surge suppressor on the cable close to the load can reduce the influence of surge on the GOT.	☐ Effective ☐ Ineffective

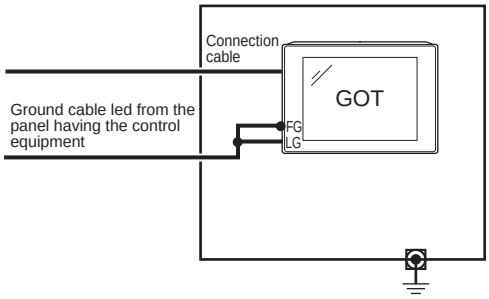
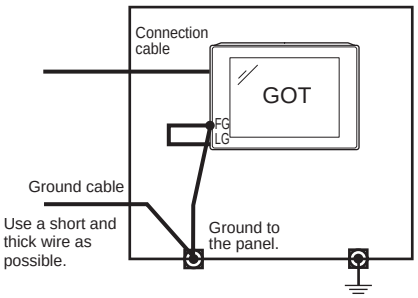
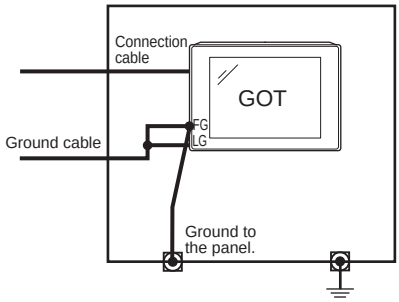
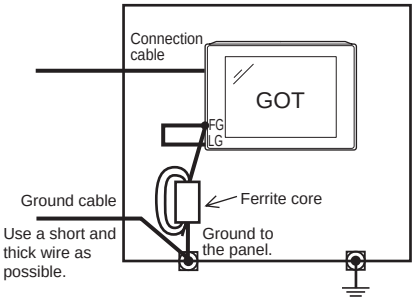
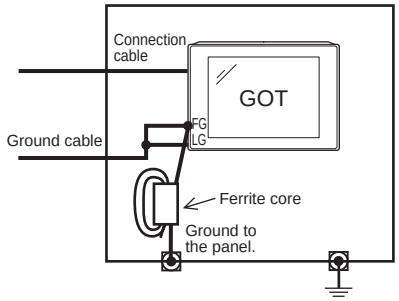
Entry area

Model name of the surge suppressor	Equipment name

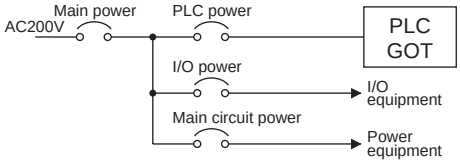
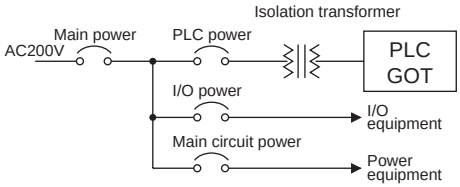
(5) Grounding status

Current status		The FG cables of the control equipment (such as PLC) and the power equipment (such as servo amplifier) are connected as shown by "a".	☐ Connected ☐ Not connected
Measure for the FG cables connected Fig. A		Perform independent grounding at two places as shown in Fig. A. Independent grounding can reduce the influence of noise. If independent grounding is not allowed, be sure to perform shared grounding as shown in Fig. B.	☐ Effective ☐ Ineffective
Fig. B			

(6) Grounding status of the panel on which the GOT is installed

<table>
<tr>
<td>Current status</td>
<td> 
</td>
<td>A single ground cable is led from the panel having the control equipment such as PLC to the panel having the GOT.</td>
<td>☐ Led
☐ Not led</td>
</tr>
<tr>
<td rowspan="3">Measure for the ground cable led</td>
<td>Fig. A
 
</td>
<td rowspan="2">Connecting the ground cable to the panel having the GOT as shown in Fig. A to reduce the potential difference may prevent the malfunction.
When wiring as shown in Fig. A is difficult, perform wiring as shown in Fig. B.</td>
<td rowspan="2">☐ Effective
☐ Ineffective</td>
</tr>
<tr>
<td>Fig. B
 
</td>
</tr>
<tr>
<td>Fig. C
 
</td>
<td>Attaching the ground cable to the ground cable connected to the panel having the GOT as shown in Fig. C reduces the influence of noise.
When wiring as shown in Fig. C is difficult, perform wiring as shown in Fig. D.</td>
<td>☐ Effective
☐ Ineffective</td>
</tr>
<tr>
<td></td>
<td>Fig. D
 
</td>
<td></td>
<td></td>
</tr>
</table>

(7) Power supply system

Current status		The power from the same system is used for the GOT, I/O equipment (such as relay), and power equipment (such as servo amplifier).	☐ Used ☐ Not used
Measure for the equipment for which the power from the same system is used		Connecting an isolation transformer as well as separating the wiring of the GOT power from that of the power of the I/O equipment and power equipment reduces the influence of noise.	☐ Effective ☐ Ineffective

3 System configuration check sheet

Fill in the brackets with the unit/module name.

(1) System configuration of the GOT		
(a) GOT main unit		[ ]
(b) Option function board	☐ Used	[ ]
	☐ Not used	
(c) Communication interface	☐ Communication unit	[ ]
	☐ GOT built-in interface	
(d) Option unit	☐ Used	[ ]
	☐ Not used	
(e) Cable between the PLC and GOT		[ ]
(f) Cable length		[m]
(g) If any other unit etc. is used, please describe it.		

(2) System configuration of the PLC		
(a) Power supply module		[ ]
(b) CPU module		[ ]
(c) Serial communication module/ computer link module	☐ Used	[ ]
	☐ Not used	
(d) Network module	☐ Used	[ ]
	☐ Not used	
(e) Interrupt module	☐ Used	[ ]
	☐ Not used	
(f) Positioning module	☐ Used	[ ]
	☐ Not used	
(g) Number of extension stages		[stages]
(h) If any other module etc. is used, please describe it.		

(Continued to next page)

Entry area for recurrence (when the malfunction occurred after the action is taken)

(3) Describe the operation situation when freezing of the screen or faulty display of the GOT has reocurred.

20.2 Troubleshooting in Bus Connection

When connect GOT and PLC CPU with bus connection, and the cause is not clear in "20.3.2 List of Error Message/System Alarm", execute the following troubleshooting.
Refer to the following for details concerning the bus connection.

☞ GOT1000 Series Connection Manual

20.2.1 Locating error positions

Explanation regarding the method of specifying the error part.
(Please refer to User's Manual of used PLC CPU for details related to the PLC CPU error and special register.)

(1) How to locate error positions:

(a) Use of peripheral devices
Using the peripheral devices such as GX Developer, check what type of the error occurs on the PLC CPU and, based on the error message on the PLC CPU, check each module and cable for installation and earthing statuses.

(b) Error timing
Check the timing of errors.

1) An error occurs when the power is turned on or immediately after the PLC is reset:
The error may be detected by the initial processing of the PLC CPU.
In this case, because the faulty module may not be identified, use only an END instruction for the sequence program and remove the modules one by one until the error does not occur.
When the error is eliminated after a specific module has been removed, the module may be causing the error.

2) An error occurs after a specific operation or several seconds:
The error may occur in the sequence program. Check the error step where the error may occur and the sequence program in that step.
The sequence program can be diagnosed throughout by merely using an END instruction for the sequence program.

3) An error occurs when a specific device operates:
The mis-operation may be caused by noise.
Check that any signal line such as bus cable is not laid out too close to the operating device. If the line is too close to the device, separate the line 100 mm or more from the device.

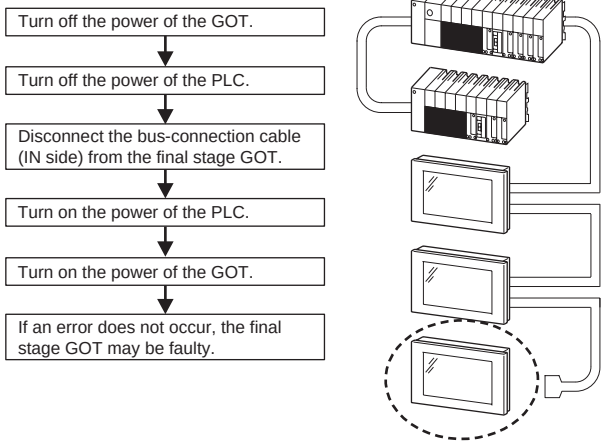
(c) Locating the module where an error occurs:
Based on the PLC CPU error codes and special resister information, locate a specific module where an error occurs.

By the method stated above, correct the sequence program or replace the faulty module with a new one, and check whether the error occurs.
If the error continues to occur, it may have another cause.
Referring to 20.2.2 "Further locating error positions", locate the error position further.

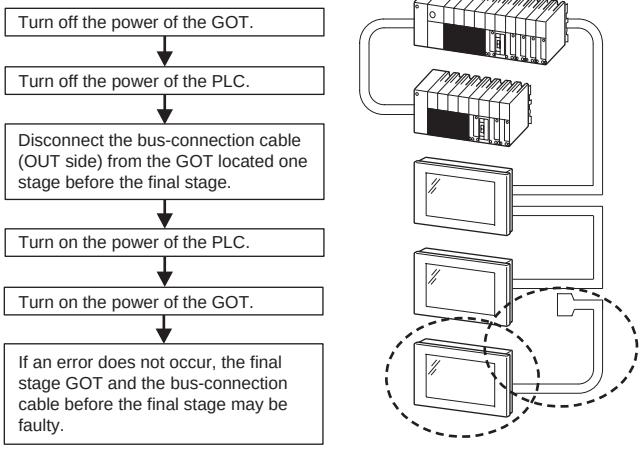
20.2.2 Further locating error positions

If the function of the PLC cannot be recovered even when the module on which an error occurs is replaced with a new one, the error may be caused by the effect from another module.
Disconnect the extension cables and bus connection cables in order from the modules starting from the module located furthest from the operating position in the system, and check for the status of occurrence of the error each time the cables are disconnected until the error does not occur.
The module or extension cables/bus-connection cables disconnected immediately before the error does not occur are considered to cause the error.
Examples of the ways of further locating error positions are shown below. (When use the extension base unit QnASCPU)

Example 1:



Example 2:



Repeat the examples 1 and 2 above to locate error positions.

Point

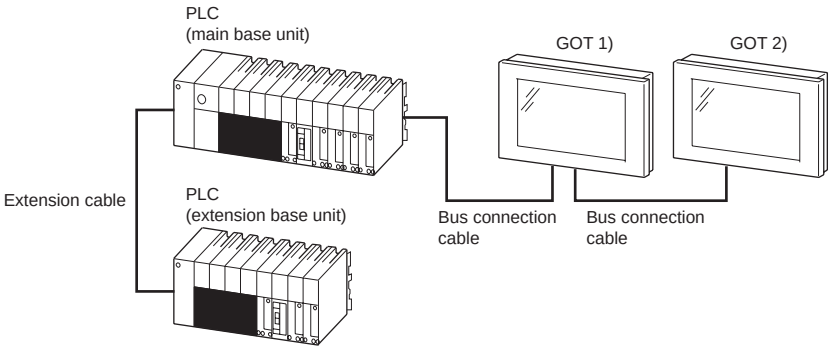
Notes on narrowing the error part range

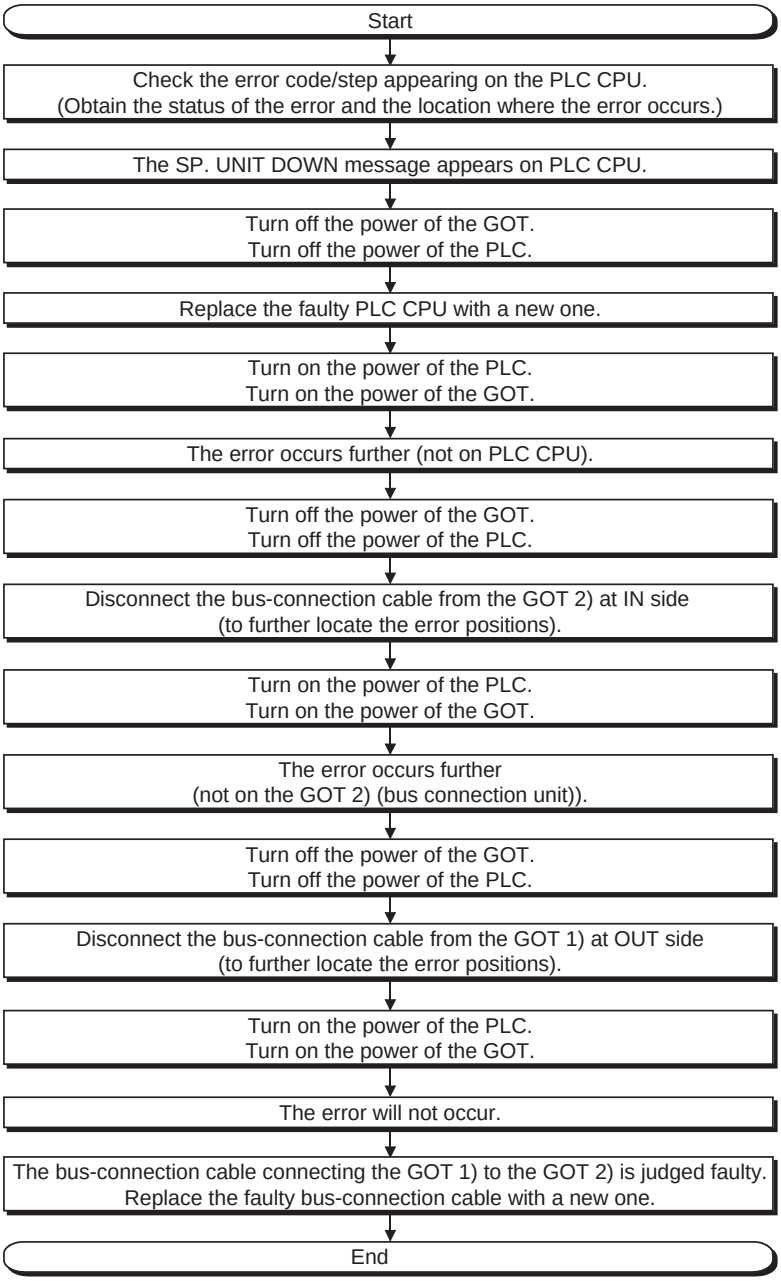
1. When disconnecting the extension base units in order, use only an END instruction for the sequence program, and any error resulting from the sequence program will not occur, and the status of occurrence of errors will be obtained easily.
2. When the frequency of occurrence of an error is low, check the error by taking a rather long time with the modules disconnected.

The checks stated above are effective to locate a noise invading route when the mis-operation is caused by noise.

20.2.3 Specific example of troubleshooting

Taking the following system as an example, troubleshooting is shown when PLC CPU error occurred. (When QnASCPU and the extension base unit are used)





20.3 ERROR MESSAGE AND SYSTEM ALARM

This chapter describes the error message and system alarm displayed in the GOT.
As the error code and error message displaying functions when an error occurs at the GOT, controller or network, there are two kinds: system alarm and advanced system alarm.
For details of the system alarm and advanced system alarm, refer to the following.

☞ GT Designer2 Version□ Screen Design Manual

Remark

Error code and channel No.

- Error codes can also be confirmed in the error code storage area of the system information function.
- The channel No. where an error is occurring can be confirmed with the GOT special register (GS262 to 264).

For details of the system information and GOT special register, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

20.3.1 Error Contents Display

This section describes the example for displaying error code and error message on GOT.

1 Popup-displaying the error code and error message (Advanced alarm popup display (System alarm))

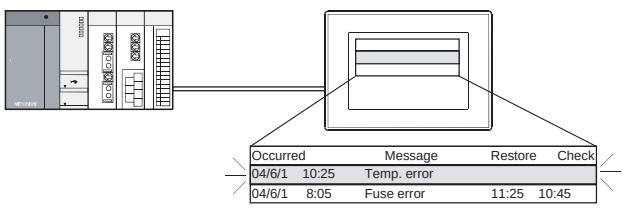
If an error occurs, the error code and error message can be popup-displayed on the front of the monitor screen.
As alarms are popup-displayed regardless of the screen type, the error occurred will not be overlooked.



Pop up generated alarms regardless of the screen.

2 Displaying error code and error message in a list (Advanced system alarm display)

If error has occurred, error code and error message can be displayed on the list set with the screen.
Multiple errors can be displayed, or the history of display can be recorded.



Create a screen to display alarms, and confirm the details of the alarms and take measures.

3 Checking error messages with the utility (Utility)

The error code and error message can be checked with the system alarm display of the utility when the object is not set.

☞ 14.9 System Alarm Display

•••••••••••••• Error code and reference manual

Error source	Error code	Description	Channel No. storage destination *1	Reference
Controller	0 to 99 (Value of D9008)	Error code of CPU (for ACPU)	GS263	User's manual of the ACPU connected with GOT
	100 to 299	Error code of the following controllers • FXCPU*2 • Third party PLC • Temperature controller (OMRON temperature controller only)		User's manual of the controller connected with the GOT Deal with errors according to the error messages.
GOT*5	300 to 399	Error code of the GOT main unit function	GS262*4	20.3.2 List of Error Message/System Alarm
	400 to 499	Error code of the GOT communication function		
	500 to 699	Error code of the GOT main unit function		
Network	800 to 999	Error code of network	GS264	
CPU	1000 to 10000 (Value of SD0)	Error code of CPU (for QCPU, QnACPU)	GS263	User's manual of the QCPU and QnACPU connected with GOT
Servo amplifier*3	20016 to 20237	Error code of servo amplifier		User's manual of the servo amplifier connected to GOT

*1 For details of GOT special registers (GS262 to 264), refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual (2.9.1 GOT internal devices)

*2 The assigned error code for FXCPU is 100 to 109, which displays the status of M8060 to M8069.
(Example) When the error code (100) error occurs, correct the error according to the M8060 description.

*3 The error code displayed on GOT is calculated by changing the error code (Hexadecimal) displayed on the servo amplifier to the decimal number and adding 20000 to it.
When referring to the manual of servo amplifier by the error code displayed as a GOT system alarm, subtract 20000 from the GOT error code and change its lower three digits to the hexadecimal number.
(Example: When GOT system alarm is 20144, the error code of servo amplifier becomes 90H.)

*4 Channel No. will not be stored depending on the error code.
For channel No. storage availability for each error code, refer to the following.

☞ 20.3.2 List of Error Message/System Alarm

*5 An alarmed drive cannot be confirmed in the system alarm regarding file access; however, it can be specified by confirming the file access error signal (b7 to 10) of system signal 2-2.

20.3.2 List of Error Message/System Alarm

The system alarm detected with GOT is shown below.

Error code	Error message	Action	Channel No. storage
303	Set monitor points too large. Decrease setting points.	Decrease the number of objects from the displayed screen. For the number of maximum objects for 1 screen, refer to the following. ☞ GT Designer2 Version□ Screen Design Manual	×
304	Set trigger points too large. Decrease setting points.	The number of objects using Sampling/Cycle during ON/ Cycle during OFF exceeds 100. Decrease the number of objects.	×
306	No project data. Download screen data.	The project data is not downloaded to the built-in flash memory. Download the project data to the built-in flash memory.	×
307	Monitor device not set	The monitor device of the object is not set. Set the monitor device of the object.	×
308	No comment data. Download comment.	The comment file does not exist. Create the comment file and download to GOT.	×
309	Device reading error. Correct device.	The error occurred when reading a continuous device. Correct the device.	×
310	Project data does not exist or out of range.	1. Specified base screen / window screen does not exist in the project data. 2. Specified base screen / window screen is out of the permissible area. Specify the existing base screen / window screen.	×
311	No. of alarm has exceeded upper limit. Delete restored alarm.	The number of alarm histories that can be observed by the alarm history display function has exceeded the maximum points. Delete the restored history to decrease the number of alarm histories.	×
312	No. of sampling has exceeded upper limit. Delete collected data.	The collection frequency exceeded the upper limit when "Store Memory" and "Accumulate/Average" were set in the scatter graph. 1. Approve "Clear trigger" setup in the scatter graph. 2. Set the "Operation at frequency over time" to "Initialize and Continue" in scatter graph.	×
315	Device writing error. Correct device.	Error occurred while writing in the device. Correct the device.	×
316	Cannot display or input operation value. Review expression.	In indirect specification of comment/parts number, the data operation result exceeded the range in which device type can be expressed. Review the data operational expression, in order not exceeding the range in which the device type can be expressed.	×

Error code	Error message	Action	Channel No. storage
317	Too high frequency of data collection. Review conditions.	Data of an object, to which [Collect data only when trigger conditions are satisfied] is set, are collected too frequently, or the number of objects has exceeded the number of objects collectable simultaneously. 1. Set a longer cycle for trigger occurrence to each object. 2. Make the settings so that 257 or more display triggers of objects, to which [Collect data only when trigger conditions are satisfied] is set, do not occur simultaneously.	×
320	Specified object does not exist or out of range.	The part file does not exist. Create the part file and download to GOT.	×
322	Dedicated device is out of range. Confirm device range.	The monitored device No. is out of the permissible area of the targeted PLC CPU. Set the device within the range that can be monitored by the monitored PLC CPU and parameter settings.	×
330	Insufficient memory media capacity. Confirm M-card capacity.	Available memory of the memory card is insufficient.Confirm the available memory of the memory card. The available memory can be confirmed by system information screen, which is described in GT Designer2 Version□ Screen Design Manual.	×
331	Memory card not installed or M-CARD switched OFF	The memory card is not installed or in the drive access switch is OFF in drive. 1. Install the memory card in the specified drive. 2. Turn ON the access switch.	×
332	Memory media is not formatted.	Memory card is not formatted or formatted incorrectly. Format the memory card.	×
333	Unable to overwrite. Memory card is write-protected.	Memory card is write-protected. Cancel the write-protection of memory card.	×
334	Memory media error. Replace memory media.	Memory card is faulty. Replace the memory card.	×
335	Memory card battery voltage low. Replace battery.	The battery voltage of the memory card is low. Replace the battery of the memory card.	×
337	File output failed. Confirm output file path.	Either of the following folder or file with the name same as the file to be created exists in the storage destination memory card. ▪ Folder storing data ▪ Write-protect file Delete the above folder or file, or change the name of the file to be created.	×
340	Printer error or power failure	Printer is faulty or the printer power supply has not been turned on. 1. Confirm the printer. 2. Turn on the power supply of the printer.	×

Error code	Error message	Action	Channel No. storage
341	Printer error	Printer is faulty or the printer power supply has not been turned on. 1. Confirm the printer. 2. Turn on the power supply of the printer.	×
342	External power is not supplied to external I/O unit	Error occurred at the external I/O interface module. 1. If an external power supply (24VDC) is not supplied, supply the external power supply. 2. If an external power supply is supplied, replace the external I/O interface module.	×
343	External I/O unit installation error. Check if firmly installed.	The external I/O interface module is not installed correctly. Install the external I/O interface module correctly.	×
345	BCD/BIN conversion error Correct data	Any value that cannot be converted to a BCD/BIN value is being displayed/input. 1. Change the device data to be displayed to the BCD value. 2. Correct the input value to the 4 digits integer.	○
351	Recipe file error. Confirm content of recipe file.	The contents of the recipe file are not normal. 1. Confirm the contents of the recipe files in the memory card. 2. Reboot the GOT after deleting the recipe file in the memory card (format).	×
352	Recipe file make error. Reboot GOT after inserting memory card.	Failed to generate recipe file. Reboot the GOT after installing the memory card.	×
353	Unable to write Recipe file. Confirm memory card is inserted.	Failed to write in the recipe file. 1. Confirm the write-protection of the memory card. 2. Confirm the contents of the memory card. 3. Do not pull out the memory card while recipe is operating.	×
354	Recipe file write error	Error occurred while writing in the recipe file. Do not unplug the memory card while recipe is operating.	×
355	Recipe file read error	Error occurred while writing in the recipe file. 1. Do not unplug the memory card while recipe is operating. 2. Confirm the contents (device value) of the recipe file in the memory card.	×
356	File system error occurred in PLC. Confirm file register.	Error occurred in the specified file register when executing the recipe function by specifying the file register name. 1. Execute the recipe function again after confirming the file register name. 2. Execute the recipe function again after formatting the PC memory in the specified PLC CPU drive with GX Developer.	×

Error code	Error message	Action	Channel No. storage
357	Error in specified PLC drive Confirm PLC drive	When executing the recipe function specifying the file register name, error occurred in PLC CPU drive. 1. Execute the recipe function again after confirming the specified PLC CPU drive. 2. Execute the recipe function again after formatting the PC memory in the specified PLC CPU drive with GX Developer.	×
358	PLC file access failure. Confirm PLC drive.	When the recipe function is executed specifying the file register name, PLC CPU file register could not be accessed. 1. Execute the recipe function again after confirming the specified PLC CPU drive / file register name. (When you specify drive 0, execute the recipe function again after changing to other drives.) 2. Confirm whether the memory card is write-protected, and execute the recipe function again.	×
359	Processing from another peripheral device. Execute it after.	When the recipe function is executed specifying the file register name, other peripherals carry out the process to the file register. Wait until the processing of other peripherals end, and execute the recipe function again.	×
360	0 divisor division error. Confirm operation expression.	Zero division occurred by the data operational expression. Review the data operational expression so that the divisor should not become 0.	×
361	Specified device No. is out of range.	The entered file number is out of range. Check the entered file number, and enter a valid value (1 to 9999).	×
362	Invalid device value in time action setting	When controllers are controlled with the GOT's time action function, the set No. is our of range, or the set device values regarding the operation settings are out of range or invalid. Set valid values.	×
370	Upper and lower limit value error. Confirm value setting.	The setting of lower/upper limit value is [Upper limit < Lower limit]. Correct the setting so as to be "Upper limit ≥ Lower limit".	×

Error code	Error message	Action	Channel No. storage
402	Communication timeout. Confirm communication pathway or modules.	The time-out error occurred during communicating. 1. Confirm the cable omission, the communication unit mounting status and status of the PLC. Channel No. is not displayed in error code or error message in the case an error occurs when using the multi-channel function. Refer to the following manual to identify the channel No. in error. ☞ GOT1000 Series Connection Manual (Description of "Checking for normal monitoring" of each connection type) 2. This error may occur when the load of PLC CPU becomes heavier while accessing other stations. In such case, transfer the data of the other station to the host station PLC CPU and monitor them at the host. 3. Put COM instruction when the PLC scanning is long.	○
403	SIO status error. Confirm communication pathway or modules.	Either of the overrun error, parity bit error or flaming error was generated when the RS-422 / RS-232 communication was received. Confirm the cable omission, the communication module mounting status, status of the PLC.and the transmission speed of the computer link. Channel No. is not displayed in error code or error message in the case an error occurs when using the multi-channel function. Refer to the following manual to identify the channel No. in error. ☞ GOT1000 Series Connection Manual (Description of "Checking for normal monitoring" of each connection type)	○
406	Specified station access is out of range. Confirm station no.	1. Station numbers other than master/local station are specified at the CC-Link connection (via G4). 2. A PLC CPU other than QCPU is accessed. Confirm the station number of the project data.	○
407	Accessed other network. Change network setting.	• When monitoring the same network as the GOT The GOT accesses the other networks with the MELSECNET/H, MELSECNET/10 (PLC to PLC network), or CC-Link IE controller network connection.Confirm the network number of the project data so as not to access to other networks. • When monitoring other networks Reconfigure the [Routing Information Setting] of GT Designer2 or the [Routing parameters] of GX Developer. • When the GT15-75J71LP23-Z/GT15-75J71BR13-Z is used These models cannot monitor other networks. • Confirm Network No. of the project data, in order for not accessing other networks.	○

Error code	Error message	Action	Channel No. storage
410	Cannot perform operation because of PLC run mode. stop the PLC.	The operation, which could not be performed during RUN of PLC CPU, was performed. Stop the PLC CPU.	○
411	Memory cassette is write-protected. Check the memory cassette.	The memory cassette installed in the PLC CPU is EPROM or E^2PROM, and it is in a protected status. Confirm the memory cassette installed in PLC CPU.	○
412	Cannot read/write device protected by keyword. Remove keyword.	The key word is set in PLC CPU. Cancel the key word.	○
420	E71 specification is ASCII.	[ASCII code] is selected in [Ethernet operations] of the PLC side setting. Select [Binary code].	○
421	E71 is set as read-only. Clear setting.	The Ethernet module on the PLC side is set in read-only. Set the Ethernet module on the PLC side to write-enabled.	○
422	Not communicating between CPU and E71. Confirm CPU error.	PLC CPU error. Communication between PLC CPU and the PLC side Ethernet module impossible. Confirm whether there is error in PLC CPU by GX Developer etc. (Confirm buffer memory)	○
423	Insufficient network table information. Add station no.	The station number set in the project data and the station number set in the switching station No. device do not exist in the Ethernet setting of GT Designer2. 1. Add the station number set in the project data to the Ethernet setting of GT Designer2. 2. When using the station No. switching function, check the data of the switching station No. device. When the station number specified in the switching station No. device is not set in the Ethernet setting, add the station number to the Ethernet setting. When the station number does not exist in the system, change the data of the switching station No. device. (Set the station number so that it becomes the same as the station number of the PLC side Ethernet module set in the parameter setting of GX Developer.)	○

Error code	Error message	Action	Channel No. storage
424	Same sta. on GOT & project data. Review communication parameter.	The station number set in the GOT's utility is the same as the station number set in the Ethernet setting of GT Designer2 (the station number of the PLC side Ethernet module) or in the project data. Check the following contents so that the multiple station numbers should not be the same. 1. Check the GOT's station number in the GOT's utility. 2. Check the station number set in the project data. 3. Check the station number set in the Ethernet setting. (Set the station number so that it becomes the same as the station number of the PLC side Ethernet module set in the parameter setting of GX Developer.) 4. When using the station No. switching function, check the data of the switching station No. device.	○
448	PLC cannot handle as requested. Correct devices.	A device outside the range of QnACPU file registers and the buffer memory was specified. Correct the monitor device by setting file register of the PLC CPU.	○
449	Dedicated device is out of range. Confirm device range.	1. Set the address for the special function module in the GOT monitor available range. 2. Set the device in the GOT monitor available range.	○
450	Path has changed or timeout occurred in redundant system.	The path has been switched or timeout occurred in the redundant system. 1. Check the PLC CPU to know if the path has been switched. 2. Check the cable connection status, the communication unit installation status, and the PLC CPU status. 3. This error may occur when the load of the PLC CPU becomes heavier when accessing other stations. In such a case, transfer the data of the other stations to the host station PLC CPU and monitor them at the host. 4. Perform one of the following operations if the PLC scanning time is long: COM instruction/Extension of END processing/Setting of the number of processing times for general data/Data update batch processing.	○
451	Q redundant system settings and current config. do not match.	Change the Q redundant setting in accordance with the actual Q redundant CPU system.	○
460	Communication unit error	1. Reset the power of the GOT. 2. Replace the unit.	○
480	Communication channel not set. Set channel number on Utility.	Channel (CH.No.1 to 4) to communicate with a controller is not set. 1. After setting the Communication Settings on the GT Designer2, download it to the GOT. 2. Change the channel assignment in the Communication Setting on the utility.	○ *1

Error code	Error message	Action	Channel No. storage
481	Communication unit not mounted to the slot of active channel.	The interface where the channel (CH No.1 to 4) is set does not have a communication unit installed. 1. Install a communication unit to the interface where the channel (CH No.1 to 4) is set. 2. Change assignment of the channel (CH No.1 to 4) in the Communication Setting.	○ *1
482	Too many same units are mounted. Confirm the no of units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○ *1
483	Simultaneous mounting of the units are not allowed.	Two or more units which cannot be mounted on the GOT simultaneously are mounted. Check the mounted units, and remove unnecessary units.	○ *1
484	Unit mounted incorrectly. Move the unit to correct position.	The unit is not mounted on the GOT in the correct position. Confirm the mounting position of the unit.	○ *1
485	Too many units mounted on GOT. Reduce units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○ *1
486	Communication unit not corresponded to set communication driver.	The communication driver set in the Communication Setting and the communication unit installed on the GOT do not match. 1. Check whether the communication driver set in the Communication Setting is correct. 2. Check whether any incorrect communication unit has been installed on the GOT.	○ *1
487	Please turn on the PLC and the GOT again.	Turn the power of the PLC and GOT on again.	○
488	Too many units mounted on GOT. Reduce units.	Units are mounted on the GOT exceeding the maximum number of mountable units.Check the number of units, and remove unnecessary units.	○ *1
489	Inactive channel has been selected at Communication Settings.	Inactive channel No. has been set in the project data. 1. Check whether any unnecessary channel No. has been set in the project data. 2. Check whether channel Nos. set in the project data are set in the Communication Settings.	○ *1
490	Simultaneous mounting of the units are not allowed.	Two or more units which cannot be mounted on the GOT simultaneously are mounted.Check the mounted units, and remove unnecessary units.	○ *1
491	Too many units mounted on GOT. Reduce units.	Units are mounted on the GOT exceeding the maximum number of mountable units.Check the number of units, and remove unnecessary units.	○ *1
500	Warning! Built-in battery voltage is low.	The voltage of the GOT built-in battery is decreased. Replace the GOT built-in battery.	×

Error code	Error message	Action	Channel No. storage
502	Warning! Backlight needs replacement soon.	The dedicated GS is notifying that the backlight power on addition time has reached 80% or more of the set time. The GOT can be restored by executing the addition times reset function after replacing the backlight. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition time.	×
503	Warning! Display section needs replacement soon.	The dedicated GS is notifying that the display section power on addition time has reached 80% or more of the set time. The GOT can be restored by executing the addition times reset function after replacing the display section. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition time.	×
504	Warning! Touch panel needs replacement soon.	The dedicated GS is notifying that the touching count of the touch key has reached 80% or more of the set count number. The GOT can be restored by executing the addition times reset function after replacing the touch key. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition times.	×
505	Warning! Built-in Flash ROM needs replacement soon.	The dedicated GS is notifying that the built-in flash memory writing times have reached 80% or more of the set times. The GOT must be replaced. In that case, Data backup and re-setting are needed. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition times.	×
506	Warning! Backlight needs replacement.	The dedicated GS is notifying that the backlight power on addition time has reached the set time or more. The GOT can be restored by executing the addition times reset function after replacing the backlight. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition time.	×
507	Warning! Display section needs replacement.	The dedicated GS is notifying that the display section power on addition time has reached the set time or more. The GOT can be restored by executing the addition times reset function after replacing the display section. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition time.	×

Error code	Error message	Action	Channel No. storage
508	Warning! Touch panel needs replacement.	The dedicated GS is notifying that the touching count of the touch key has reached the set count number or more. The GOT can be restored by executing the addition times reset function after replacing the touch key. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition times.	×
509	Warning! Built-in Flash ROM needs replacement. Change the GOT.	The dedicated GS is notifying that the built-in flash memory writing times have reached the set times or more. The GOT must be replaced. In that case, Data backup and re-setting are needed. The GOT can also be restored by turning off the notification signal manually. In such a case, turn it OFF after setting a value greater than the addition times.	×
510	Clock data input out of range	The value that is input as clock data is out of the input enabled range. In this case, the input value is not accepted. Confirm the input range of the value to be input as clock data, and input the proper value again.	×
520	Insufficient Flash ROM capacity	The capacity for the buffering area is insufficient in the build in flash memory 1. Confirm whether there are no mistakes in specified buffering area size. 2. Install the option function board with add-on memory.	×
521	Insufficient user memory (RAM) capacity	The capacity for the buffering area is insufficient in the user memory (RAM) 1. Confirm whether there are no mistakes in specified buffering area size. 2. Install the option function board with add-on memory.	×
522	Unnecessary file deleted to create new file.	The old file of different contents has been deleted and a new file has been created. Note that the old file is deleted and the new file is created if the file of the same name with different contents exists when creating files.	×
524	Device writing error. Correct device.	When writing in the device, error occurred. Correct the device.	×
525	Unable to read/write alarm log files under different projects.	Unable to read the alarm log file saved by the different project. Confirm where to store the alarm log file and alarm log file.	×
526	File conversion failed.	The file specified for the file conversion does not exist. Check the settings for specifying a file to be converted.	×
530	Improper monitor device. Confirm monitor channel.	The channel of the specified monitor target does not exist or the channel is not the monitor target. Confirm the monitor target channel of the screen data.	×
535	Cannot open image file.	Confirm whether any file exists in the memory card.	×

Error code	Error message	Action	Channel No. storage
536	Image file error or invalid file format.	1. Confirm whether the image file in the memory card is normal. 2. Confirm whether any image file of invalid format is stored.	×
540	Auto repeat error. Confirm system information.	Error occurred while executing the auto repeat function of the touch switch object. Confirm the followings. 1. Confirm that the other system error has not occurred during auto repeat. 2. Confirm that any error information is not stored in the system information/GS during auto repeat.	×
550	Invalid key code	The key code input execution trigger was ON with the non-target key code set in the key code storage device. Confirm the key code supported by the object where error occurs.	×
560	Language switch failure. Install optional functions.	Switched language specifying KANJI other than Japanese without the option OS installed. Install the option OS.	×
561	Language switch failure. Load expansion memory board.	Switched language specifying a KANJI region other than Japanese without the option function board with add-on memory installed. Install the option function board with add-on memory.	×
570	Recipe device points too large.	The number of the set points of the recipe device exceeds the specified range. Put the number of the set points of the recipe device within the specified range.	×
571	Capacity shortage of user memory (RAM)	There is no empty area/space in D drive. Format the D drive in the memory to secure free area.	×
581	Abnormal Advanced recipe file	Advanced Recipe cannot be executed for advanced recipe file with incorrect contents. Delete the advanced recipe file from the memory card.	×
582	Cannot generate Advanced recipe file.	Cannot generate advanced recipe file. Confirm the following and execute recipe processing again. 1. Confirm whether the memory card is installed. 2. Confirm whether the CF card access switch of the GOT is ON. 3. Confirm the available memory of the memory card.	×
583	Unable to save device value to Advanced recipe file.	Unable to save device value to advanced recipe file. 1. Confirm the write-protection of memory card. 2. Confirm whether the attribute of saving file is for reading only.	×
584	Advance recipe file save error	An error has occurred during the advanced recipe file writing. Do not pull the memory card out while the Advanced Recipe is operating.	×

Error code	Error message	Action	Channel No. storage
585	Advanced recipe file upload error	An error has occurred during the advanced recipe file reading. Do not pull the memory card out while the Advanced Recipe is operating.	×
586	Specified Advanced recipe number does not exist.	The advanced recipe of non-existing number is about to be executed. Execute advanced recipe of existing number.	×
587	Specified record number does not exist.	The advanced record of non-existing number is about to be executed. Execute record of existing number.	×
588	Cannot save recipe data to read only record.	Saving recipe is about to be executed to the record of which recipe device value cannot be edited. Make the recipe device value of the record editable with Advanced Recipe Setting of GT Designer2 or specify the record of which recipe device value can be edited.	×
589	Recipe device save error. Recipe file does not exist.	Saving recipe is about to be executed to the advanced recipe setting that is set for not using file. Specify the advanced recipe setting that uses file.	×
590	Recipe device upload error. Recipe device value does not exist.	Loading recipe is about to be executed to the record of which recipe device value is not set. Specify the record of which recipe device value is set.	×
591	Advanced Recipe error. Check recipe data.	The advanced recipe setting is not correct. Confirm the advanced recipe setting of the project data and download it to the GOT again.	×
595	Logging file error.	Logging file error. When collecting data again, delete logging files and management files.	×
596	Logging setting does not exist or setting value error.	The logging setting specified in the historical trend graph setting does not exist. Review the historical trend graph setting and specify a logging setting that exists.	×
600	Unsupported version of printer unit.	The version of OS installed in the GOT is not compatible with the printer unit. Install the extended function OS (Printer) with the latest GT Designer2.	×
601	Printer unit error.	The printer unit is installed incorrectly. The built-in flash memory of the printer unit is broken or the guaranteed life has been elapsed. Check that the printer unit is installed correctly. When the printer unit has been installed correctly, the built-in flash memory is broken or the guaranteed life has been elapsed. Replace the printer unit with new one.	×
602	Video/RGB unit not mounted	1. Check if the video/RGB input unit is installed. 2. Check if the GOT used supports video/RGB input.	×
603	External I/O unit error	Check if the external I/O unit is correctly installed.	×

Error code	Error message	Action	Channel No. storage
604	Sound output unit error	Check if the sound output unit is correctly installed.	×
610	Insufficient memory capacity.	The memory capacity for the MES interface function is insufficient. Delete unnecessary files, and reserve memory.	×
611	Improper job files. Confirm job setting.	The contents for job files are unmatched with the settings for job files. Check if there are mistakes in the settings on the setting screen.	×
612	Cannot access Logging Files Check the memory card	1. Insert a memory card. 2. Turn on the memory card access switch. 3. If the memory card has unnecessary files, delete the files.	×
613	Error in writing logfile	1. Insert a memory card. 2. Turn on the memory card access switch. 3. Check if the memory card is writable.	×
614	Error in reading logfile	1. Insert a memory card. 2. Turn on the memory card access switch. 3. Check if the memory card is readable.	×
615	Cannot connect to MES Server. Check the Server.	The server does not work normally or the connection path to the server is made up incorrectly. 1. Check the operating conditions of the server. 2. Check the network to the server.	×
616	Cannot connect to SNTP Server. Check the Server.	The settings for the SNTP server are wrong or the network to the SNTP server is made up incorrectly. 1. Check the operating conditions of the STNP server. 2. Check the network to the SNTP server.	×
800	Abnormal module status	Refer to explanations of SB0020 on the applicable network manual.	○
801	Abnormal baton passing status	Refer to explanations of SB0047 on the applicable network manual.	○
802	Abnormal cyclic transmission status	Refer to explanations of SB0049 on the applicable network manual.	○
803	Transient error	Refer to explanations of SB00EE on the applicable network manual.	○
804	The cable on the IN side is disconnected or is not connected.	Refer to explanations of SB0067 on the applicable network manual.	○
805	The cable on the OUT side is disconnected or is not connected.	Refer to explanations of SB0068 on the applicable network manual.	○
850	CC-Link switch setting error	1. Check if the switch settings have no error. 2. Check error codes stored in SW006A. 3. Refer to explanations of SB006A on the applicable network manual.	○

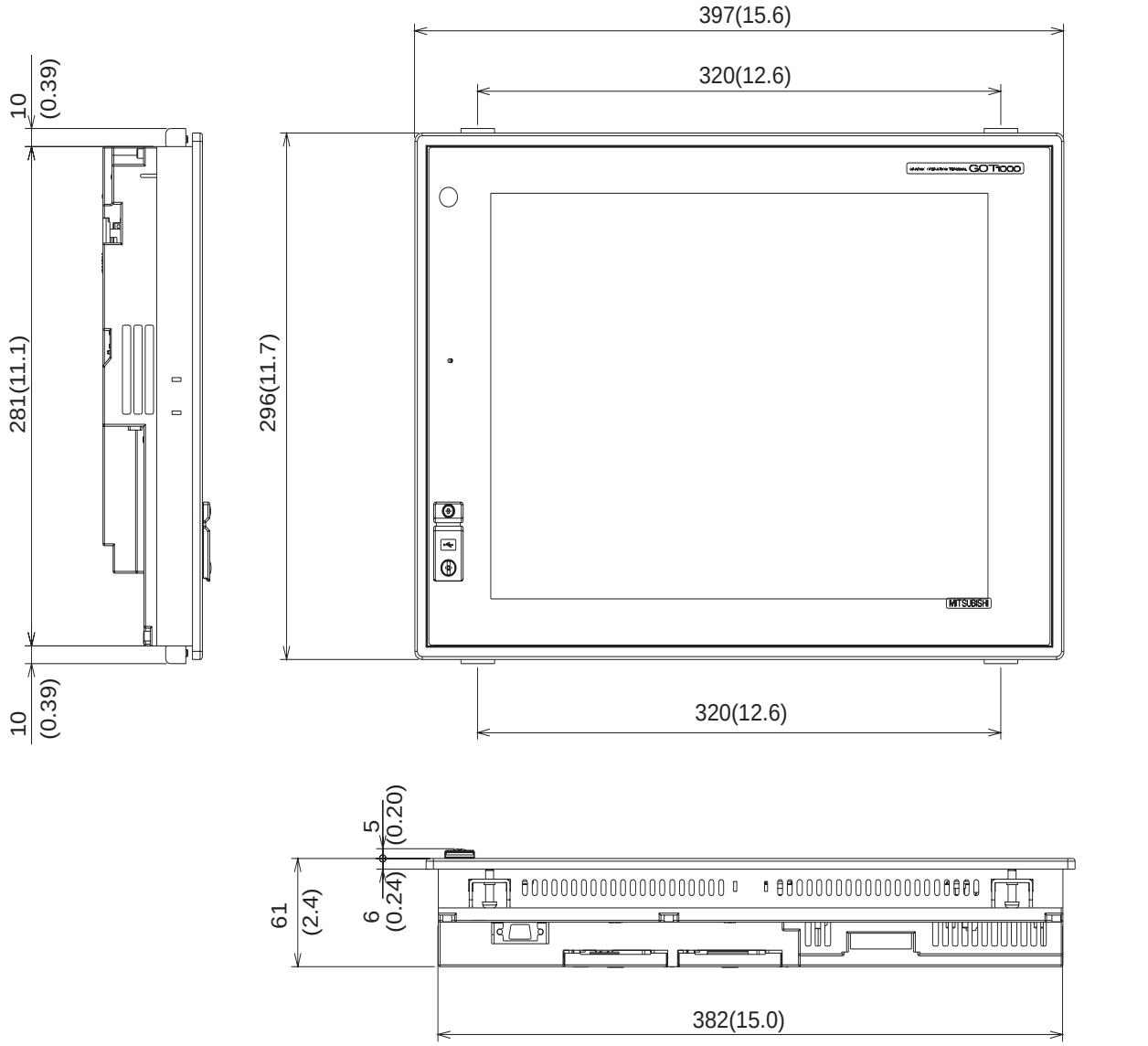
Error code	Error message	Action	Channel No. storage
851	Abnormal cyclic transmission status	1. Check if terminating resistors are connected. 2. Check error codes for the PLC CPU. 3. Check the parameter for the PLC CPU on the master station. 4. Check the error status of the master station. 5. Refer to explanations of SB006E on the applicable network manual.	○
852	Abnormal host line status	1. Check if the cable is unplugged or not. 2. Refer to explanations of SB0090 on the applicable network manual.	○
853	Transient error	1. Check the transient error occurrence status for each station stored in SW0094 to SW0097. 2. Refer to explanations of SB0094.	○

*1 When an error occurs, "FFH" is stored to the channel No.

APPENDICES

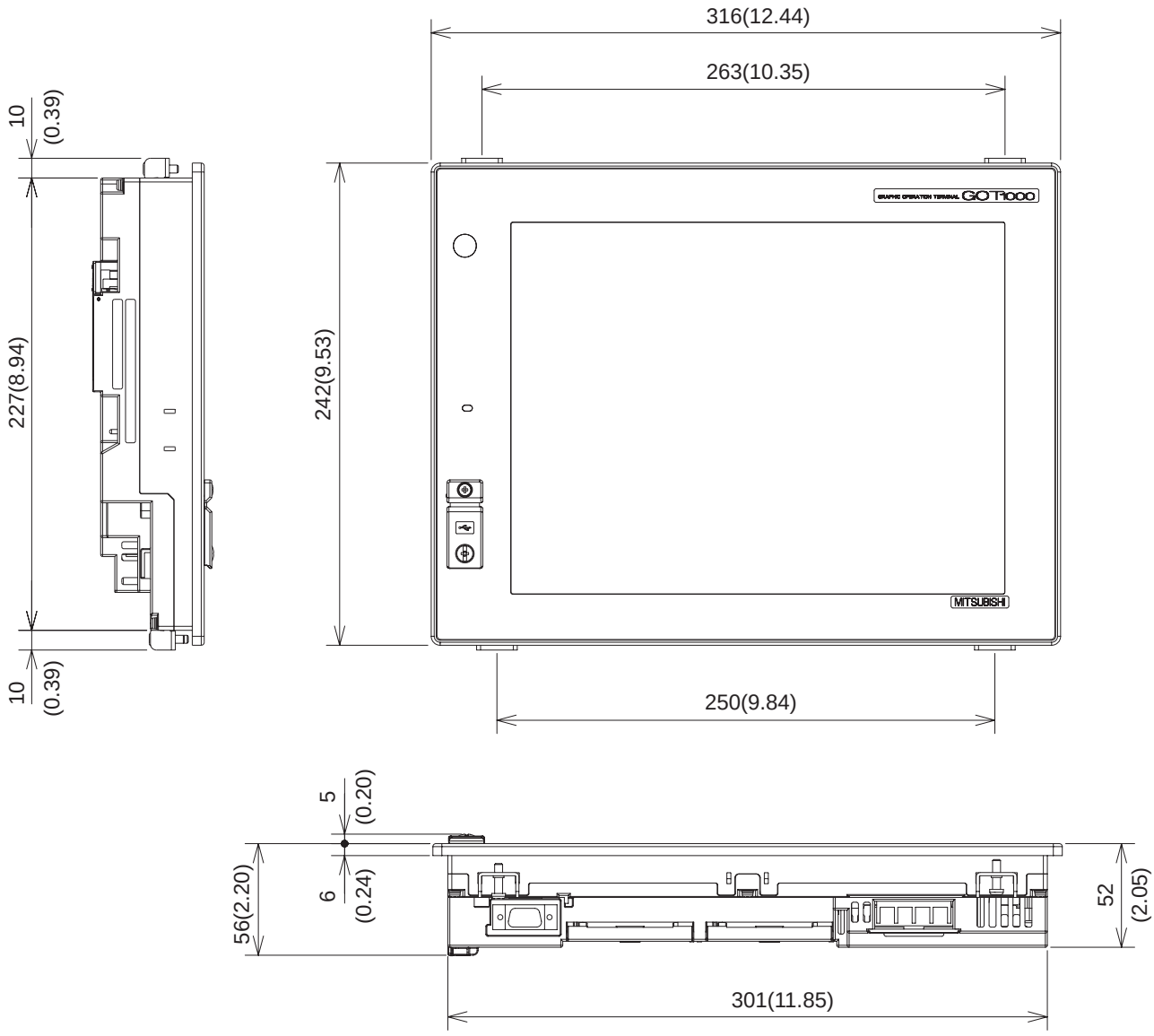
Appendix 1 External Dimensions

(1) GT1595



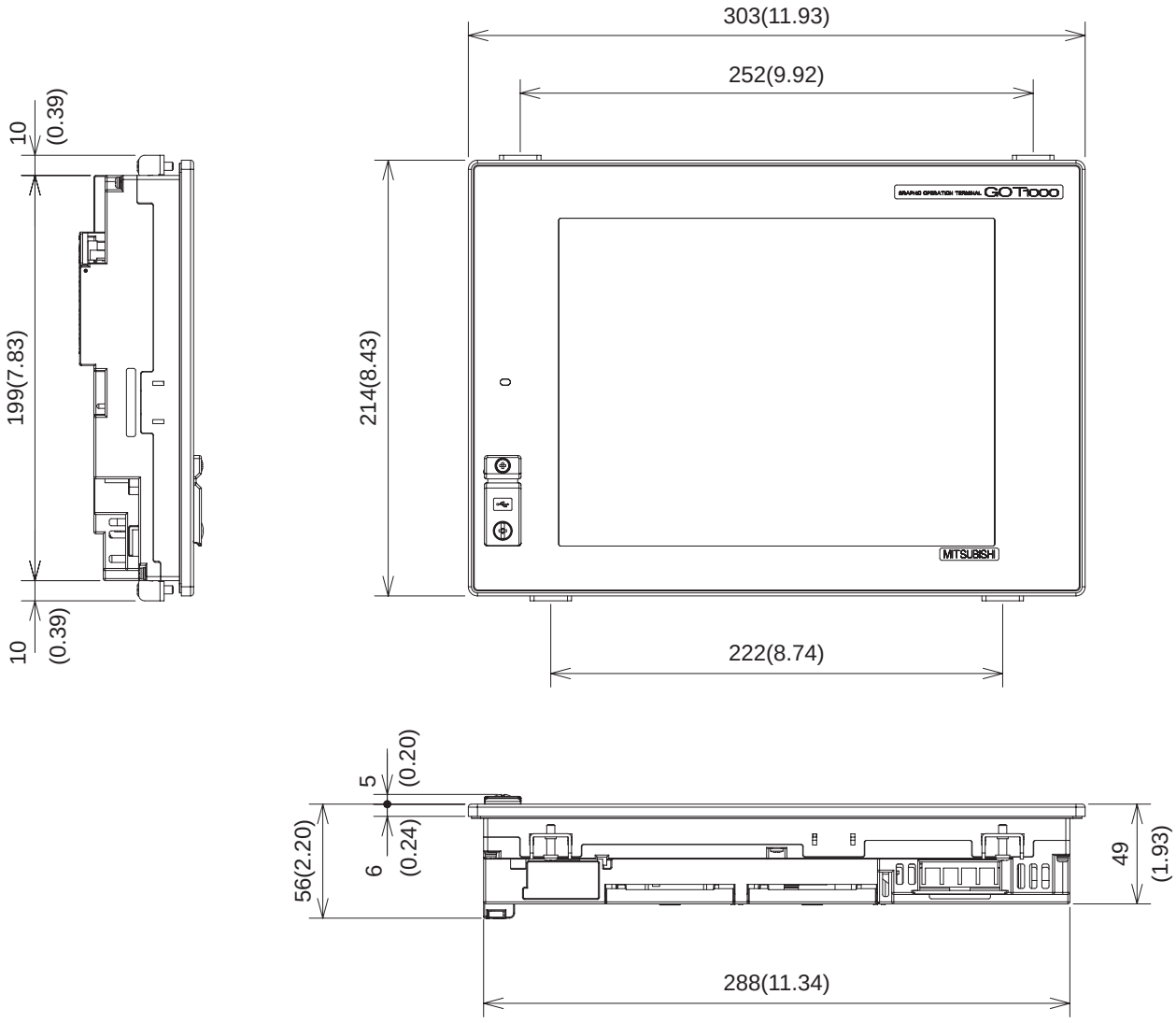
Unit:mm(inch)

(2) GT1585



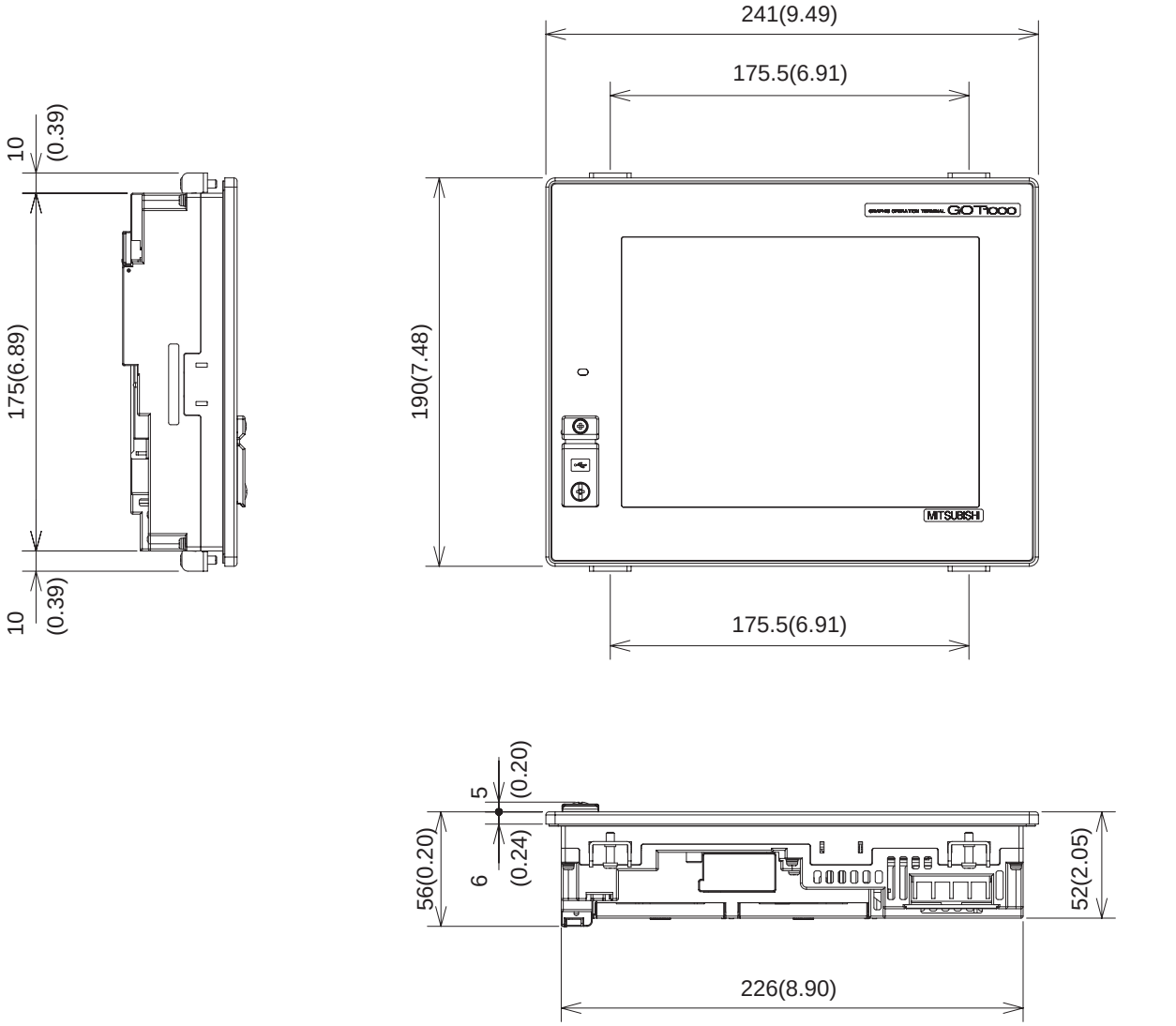
Unit: mm (inch)

(3) GT157 □



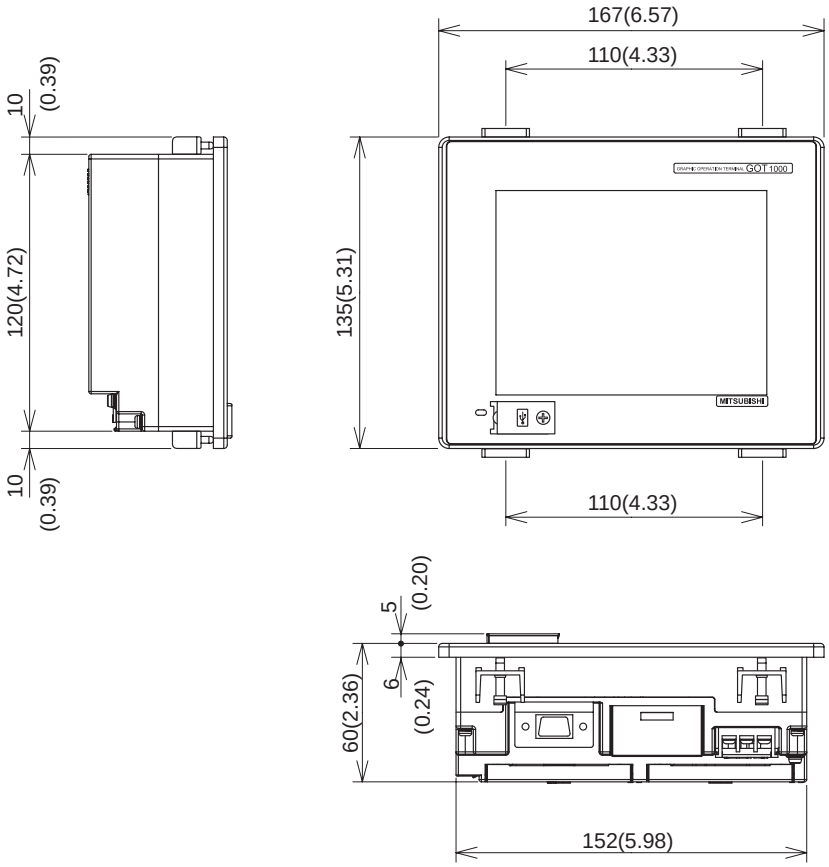
Unit: mm (inch)

(4) GT156 □



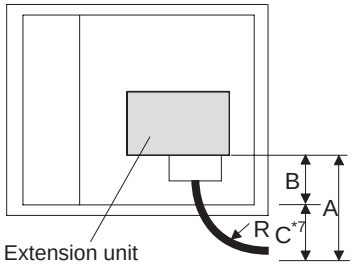
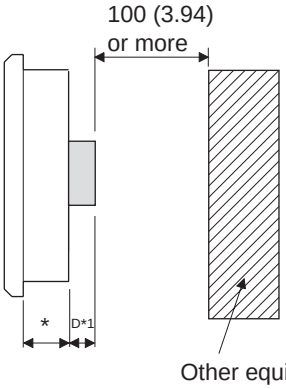
Unit: mm (inch)

(5) GT155 □



Unit: mm (inch)

(6) Depth dimension and cable bending dimensions of the GOT with extension unit

GOT rear face	GOT side face
	

GOT type	Dimension of *
GT1595	55 (2.17)
GT1585	46 (1.81)
GT157 ☐	43 (1.69)
GT156 ☐	46 (1.81)
GT155 ☐	54 (2.13)

Unit: mm (inch)

(a) GT1595

Model name	A	B	C	D	R (bending radius of the cable)
GT15-QBUS, GT15-QBUS2	95(3.74)	123(4.84)	0(0)	21(0.83)	55(2.17)
GT15-ABUS, GT15-ABUS2	73.5(2.89)				36(1.42)
GT15-75QBUSL, GT15-75QBUS2L	95(3.74)			8(0.32)	55(2.17)
GT15-75ABUSL, GT15-75ABUS2L	73.5(2.89)				36(1.42)
GT15-RS2-9P*2, GT15-RS4-9S*2	72.5(2.85)			21(0.83)	30(1.18)
GT15-RS4-TE*2	33.5(1.32)				
GT15-J71E71-100	38(1.5)*2		-		24(0.95)
GT15-J71LP23-25	*4		*4		*4
GT15-J71BR13	87.5(3.44)		0(0)		30(1.18)
GT15-J71GP23-SX	80(3.15)			34.5(1.36)	15(0.59)
GT15-J61BT13	47(1.85)			21(0.83)	28(1.1)
GT15-75J71LP23-Z	*4	130(5.12)	*4	45(1.77)	*4
GT15-75J71BR13-Z	80(3.15)		0(0)		50(1.97)
GT15-75J61BT13-Z				50(1.97)	
GT15-PRN	52(2.05)	123 (4.84)		21(0.83)	18(0.71)
GT15-CFCD	-	-	-	20(0.79)	-
GT15-CFEX-C08SET	120(4.72)	123(4.84)	0(0)		55(2.17)
GT15-DIO	81(3.19)			21(0.83)	43(1.69)
GT15-SOUT	44(1.73)				30(1.18)

Unit: mm (inch)

(b) GT1585

Model name	A	B	C	D	R (bending radius of the cable)
GT15-QBUS, GT15-QBUS2	95(3.74)	64(2.52)	28(1.1)	18(0.71)	55(2.17)
GT15-ABUS, GT15-ABUS2	73.5(2.89)		8.5(0.34)		36(1.42)
GT15-75QBUSL, GT15-75QBUS2L	95(3.74)		28(1.1)	5(0.2)	55(2.17)
GT15-75ABUSL, GT15-75ABUS2L	73.5(2.89)		8(0.32)		36(1.42)
GT15-RS2-9P*2, GT15-RS4-9S*2	72.5(2.85)		9.5(0.37)	18(0.71)	30(1.18)
GT15-RS4-TE*2	33.5(1.32)		0(0)		
GT15-J71E71-100	38(1.5)*2		-		24(0.95)
GT15-J71LP23-25	*4		*4		*4
GT15-J71BR13	87.5(3.44)		23.5(0.93)		30(1.18)
GT15-J71GP23-SX	80(3.15)		16(0.63)	31.5(1.24)	15(0.59)
GT15-J61BT13	47(1.85)		0	18(0.71)	28(1.1)
GT15-75J71LP23-Z	*3		*3	42(1.65)	*3
GT15-75J71BR13-Z	80(3.15)		16(0.63)		50(1.97)
GT15-75J61BT13-Z				47(1.85)	
GT15-PRN	52(2.05)		0(0)	18(0.71)	18(0.71)
GT15V-75V4*5	132(5.2)		68(2.68)		20(0.79)
GT15V-75R1*5	77(3.03)		13(0.51)		32(1.26)
GT15V-75V4R1*5	BNC: 182(7.17) RGB: 77(3.03)		BNC:68 (2.68) RGB:13 (0.51)		BNC:20(0.79) RGB:32(1.26)
GT15V-75ROUT*5	77(3.03)		13(0.51)		32(1.26)
GT15-CFCD	-	-	-	17(0.67)	-
GT15-CFEX-C08SET	120(4.72)	64(2.52)	56(2.20)		55(2.17)
GT15-DIO	81(3.19)	64(2.52)	17(0.67)	18(0.71)	43(1.69)
GT15-SOUT	44(1.73)		0(0)		30(1.18)

Unit: mm (inch)

(c) GT157 □

Model name	A	B	C	D	R (bending radius of the cable)
GT15-QBUS, GT15-QBUS2	95(3.74)	50(1.97)	42(1.65)	21(0.83)	55(2.17)
GT15-ABUS, GT15-ABUS2	73.5(2.89)		22.5(0.89)		36(1.42)
GT15-75QBUSL, GT15-75QBUS2L	95(3.74)		42(1.65)	8(0.32)	55(2.17)
GT15-75ABUSL, GT15-75ABUS2L	73.5(2.89)		22(0.87)	8(0.32)	36(1.42)
GT15-RS2-9P*2, GT15-RS4-9S*2	72.5(2.85)		23.5(0.93)	21(0.83)	30(1.18)
GT15-RS4-TE*2	33.5(1.32)		0(0)		
GT15-J71E71-100	38(1.5)*2		-		24(0.95)
GT15-J71LP23-25	*4		*4		*4
GT15-J71BR13	87.5(3.44)		37.5(1.48)		30(1.18)
GT15-J71GP23-SX	80(3.15)		30(1.18)	34.5(1.36)	15(0.59)
GT15-J61BT13	47(1.85)		0	21(0.83)	28(1.1)
GT15-75J71LP23-Z	*4	47(1.85)	*4	45(1.77)	*4
GT15-75J71BR13-Z	80(3.15)		33(1.3)		50(1.97)
GT15-75J61BT13-Z				50(1.97)	
GT15-PRN	52(2.05)	50(1.97)	2(0.08)	21(0.83)	18(0.71)
GT15V-75V4*6	132(5.2)	47(1.85)	85(3.35)		20(0.79)
GT15V-75R1*6	77(3.03)		30(1.18)		32(1.26)
GT15V-75V4R1*6	BNC:132 (5.2) RGB:77 (3.03)		BNC:85 (3.35) RGB:30 (1.18)		BNC:20(0.79) RGB:32(1.26)
GT15V-75ROUT*6	77(3.03)		30(1.18)		32(1.26)
GT15-CFCD	-	-	-	20(0.79)	-
GT15-CFEX-C08SET	120(4.72)	50(1.97)	70(2.76)		55(2.17)
GT15-DIO	81(3.19)	50(1.97)	31(1.22)	21(0.83)	43(1.69)
GT15-SOUT	44(1.73)		0(0)		30(1.18)

Unit: mm (inch)

(d) GT156 □

Model name	A	B	C	D	R (bending radius of the cable)
GT15-QBUS, GT15-QBUS2	95(3.74)	45(1.77)	47(1.85)	23(0.91)	55(2.17)
GT15-ABUS, GT15-ABUS2	73.5(2.89)		27.5(1.08)		36(1.42)
GT15-75QBUSL, GT15-75QBUS2L	95(3.74)		47(1.85)	10(0.39)	55(2.17)
GT15-75ABUSL, GT15-75ABUS2L	73.5(2.89)		27(1.12)		36(1.42)
GT15-RS2-9P*2, GT15-RS4-9S*2	72.5(2.85)		28.5(1.12)	23(0.91)	30(1.18)
GT15-RS4-TE*2	33.5(1.32)		0(0)		
GT15-J71E71-100	38(1.5)*3		-		24(0.95)
GT15-J71LP23-25	*4	42(1.65)	*4		*4
GT15-J71BR13	87.5(3.44)		45.5(1.79)		30(1.18)
GT15-J71GP23-SX	80(3.15)	45(1.77)	35(1.38)	36.5(1.44)	15(0.59)
GT15-J61BT13	47(1.85)	42(1.65)	5(0.2)	23(0.91)	28(1.1)
GT15-75J71LP23-Z	*4		*4	47(1.85)	*4
GT15-75J71BR13-Z	80(3.15)		38(1.5)		50(1.97)
GT15-75J61BT13-Z				52(2.05)	
GT15-PRN	52(2.05)	45(1.77)	7(0.28)	23(0.91)	18(0.71)
GT15-CFCD	-	-	-	22(0.87)	-
GT15-CFEX-C08SET	120(4.72)	45(1.77)	75(2.95)		55(2.17)
GT15-DIO	81(3.19)	45(1.77)	36(1.42)	23(0.91)	43(1.69)
GT15-SOUT	44(1.73)		0(0)		30(1.18)

Unit: mm (inch)

(e) GT155 □

Model name	A	B	C	D	R (bending radius of the cable)
GT15-QBUS, GT15-QBUS2	95(3.74)	16(0.63)	79(3.11)	23(0.91)	55(2.17)
GT15-ABUS, GT15-ABUS2	73.5(2.89)		57.5(2.26)		36(1.42)
GT15-75QBUSL, GT15-75QBUS2L	95(3.74)		79(3.11)	10(0.39)	55(2.17)
GT15-75ABUSL, GT15-75ABUS2L	73.5(2.89)		57.5(2.26)		36(1.42)
GT15-RS2-9P*2, GT15-RS4-9S*2	72.5(2.85)		56.5(2.22)	23(0.91)	30(1.18)
GT15-RS4-TE*2	33.5(1.32)		17.5(0.69)		
GT15-J71E71-100	38(1.5)		22(0.87)		24(0.95)
GT15-J71LP23-25	*3		*3		*3
GT15-J71BR13	87.5(3.44)		71.5(2.81)		30(1.18)
GT15-J71GP23-SX	80(3.15)	16.2(0.64)	63.8(2.51)	36.5(1.44)	15(0.59)
GT15-J61BT13	47(1.85)	16(0.63)	31(1.22)	23(0.91)	28(1.1)
GT15-PRN	52(2.05)		36(1.42)		18(0.71)
GT15-CFCD	-	-	-	22(0.87)	-
GT15-CFEX-C08SET	120(4.72)	16(0.63)	104(4.09)		55(2.17)
GT15-DIO	81(3.19)	16(0.63)	65(2.56)	23(0.91)	43(1.69)
GT15-SOUT	44(1.73)		28(1.10)		30(1.18)

Unit: mm (inch)

*1 The depth dimension is as follows when units allowing multiple stages are installed.

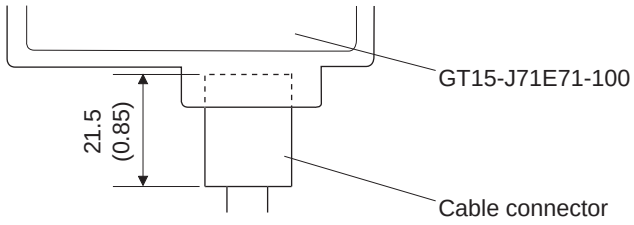
When CF card is installed, the dimensions are reduced by 1mm.

GOT model name	Units other than CC-Link IE controller network communication unit		CC-Link IE controller network communication unit	
	2-stage	3-stage	2-stage	3-stage
GT1595	42.5(1.67)	64.5(2.54)	56(2.20)	78(3.07)
GT1585	39.5(1.56)	61.5(2.42)	53(2.09)	75(2.95)
GT157 □	42.5(1.67)	64.5(2.54)	56(2.20)	78(3.07)
GT156 □	44.5(1.75)	66.5(2.62)	58(2.28)	80(3.15)
GT155 □	44.5(1.75)	66.5(2.62)	58(2.28)	80(3.15)

Unit: mm (inch)

*2 For cables prepaired by the user, the dimensions are different.

*3 This dimension is applied when the external dimension of cable connector is 21.5mm. (Refer to the following figure.) The dimension varies depending on the connector used.



*4 For cable details of GT15-75J71LP23-Z (Optical loop unit), consult the local office of Mitsubishi Electric System & Service, Co., Ltd.

*5 GT1585V-S

*6 GT1575V-S

*7 If cable bending radius is smaller than the lowest part of the case on the back of the GOT, the dimension of *7 is equal to or less than 0; however, it is written as "0" in the table.

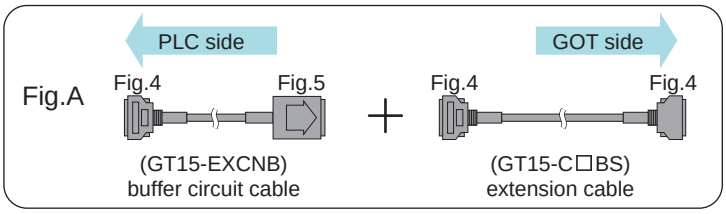
(7) External dimensions of the communication cable

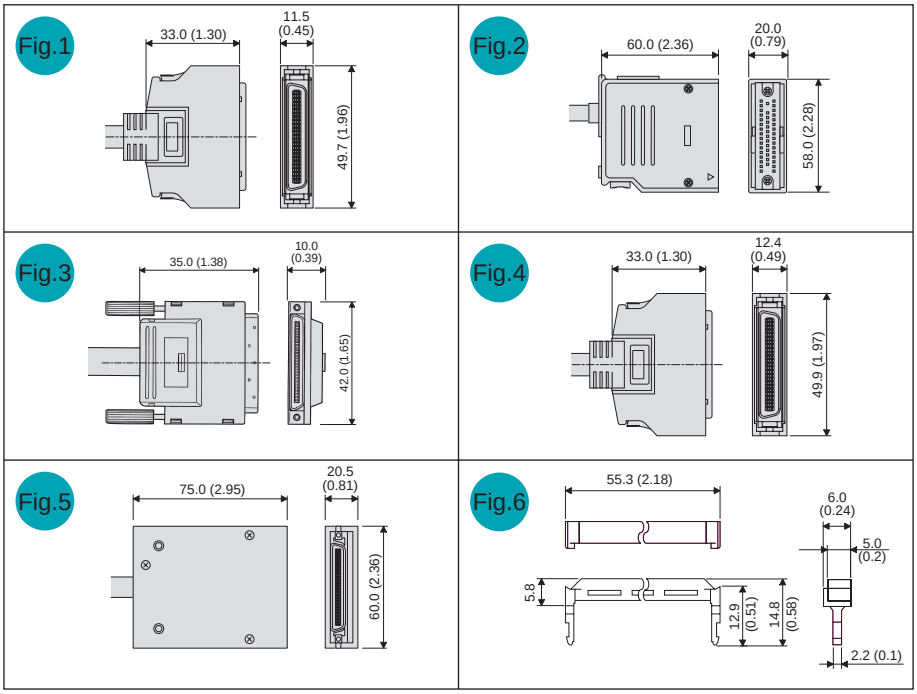
(a) External dimensions of the bus connection cable connector

Cable model	Cable length (m(ft.))	Dimensions (mm(inch)) and shape of the connector	
		GOT side	PLC side
GT15-QC□B	0.6(2),1.2(3.9),3(10),5(20),10(33)	Fig. 3	Fig. 3
GT15-QC□BS	15(49),20(66),25(82),30(98),35(120)	Fig. 3	Fig. 3
GT15-C□NB	1.2(3.9),3(10),5(20)	Fig. 1	Fig. 2
GT15-AC□B	0.6(2),1.2(3.9),3(10),5(20)	Fig. 2	Fig. 2
GT15-A1SC□B	0.7(2),1.2(3.9),3(10)5(20)	Fig. 1	Fig. 1
GT15-A1SC□NB	0.45(1.5),1.2(3.9),3(10),5(20)	Fig. 4	Fig. 2
GT15-J2C□B	1(3)	Fig. 1	Fig. 6
GT15-370C□B-S1	1.2(3.9),2.5(8.2)	Fig. 4	Fig. 4
GT15-C□EXSS-1	10.6(34.8),20.6(67.6),30.6(100)	Fig. 4	Fig. 4
GT15-C□BS	10(33),20(66),30(98)	Fig. 4	Fig. 4
GT15-EXCNB	0.5(2)	Fig. 5	Fig. 4

*1: The GT15-C□EXSS/GT15-C□BS cable has a grounding wire (1 m).
Be sure to connect the wire to control panels.

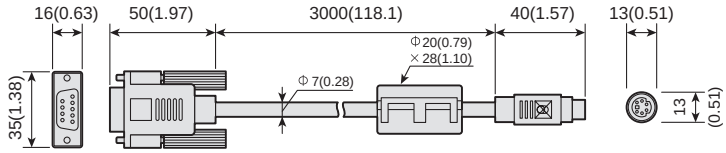
*2: The GT15-C□EXSS-1 is the set product consisting of (GT15-EXCNB+GT15-C□BS). (Refer to Fig. A)



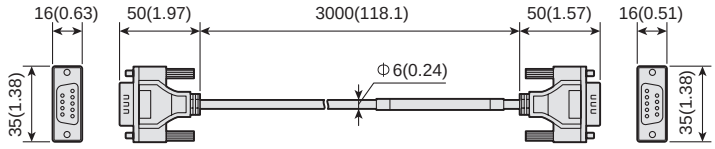


(b) External dimensions of RS-232 connection cable connector

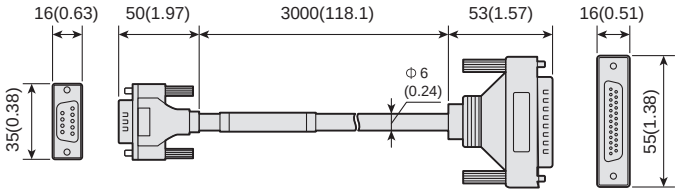
GT01-C30R2-6P



GT01-C30R2-9S



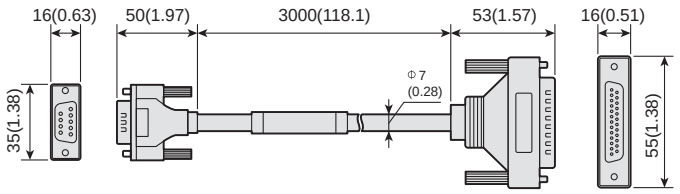
GT01-C30R2-25P



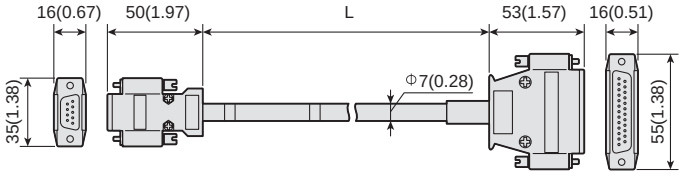
Unit: mm(inch)

(c) External dimensions of RS-422 connection cable connector

GT01-C30R4-25P



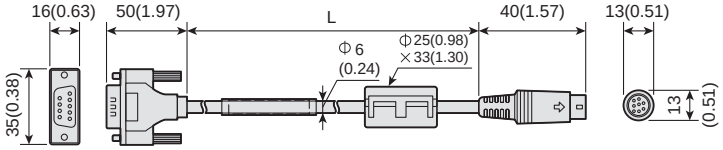
GT01-C□□□R4-25P



□□□	L	Unit: mm (inch)
100	10000(118.1)	
200	20000(787.4)	
300	30000(1181.1)	

Unit: mm(inch)

GT01-C□□□R4-8P



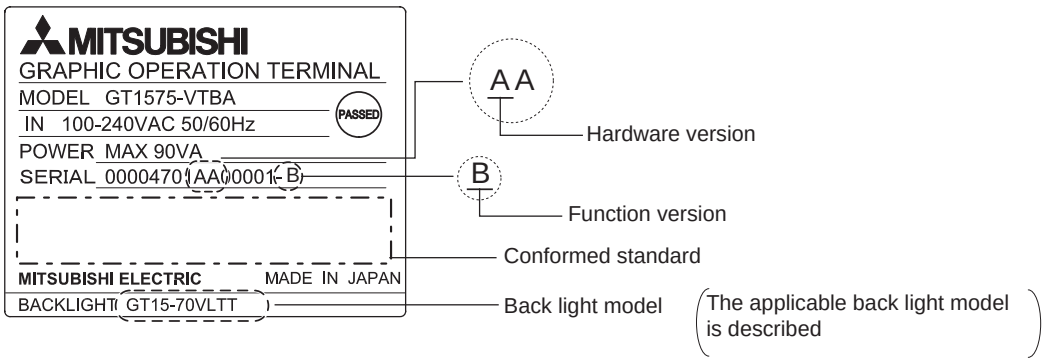
□□□	L	Unit: mm (inch)
10	1000(39.4)	
30	3000(118.1)	
100	10000(393.7)	
200	20000(787.4)	
300	30000(1181.1)	

Unit: mm(inch)

Appendix 2 Confirming of Versions and Conformed Standards

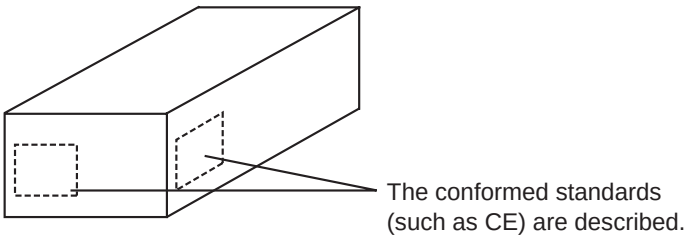
1 Rating plate

The GOT hardware version, function version, and the standards conformed by a GOT can be confirmed at the rating plate on the GOT rear face.



2 Packing box

The standards conformed by a GOT can be confirmed by the label on the packing box.
Note that the position of the label differs depending on the model or shipment date.



Appendix 3 Usage Condition of Utility Function

The function which can be used differs according to the GOT type.
Moreover, there are the function which can be set with drawing software and the function which cannot be set.

○: Applicable ×: Not applicable —: Not required

Item		Functions overview	GT15	GT SoftGOT 1000	GT11	Refe-rence
Communication setting		Assigning channel numbers and communication drivers to communication interfaces.	○	×	○	○
	Detail settings	Setting communication parameters	○	×	○	○
		Setting or deleting sequence program protection key words, canceling sequence program protection status (When connecting to FX series CPU)	○	×	○	×
GOT setup	Display	Setting the startup screen display time and screen saving time	○	○ *1	○	○
		Setting the backlight to ON or OFF during screen saving	○	—	○	○
		Switching message languages	○	○	○ *2	○
		Setting the battery alarm display to ON or OFF	○	—	○	○
		Setting the black and white inversion display to ON or OFF (For GT15, applicable to only GT1550-Q)	○	×	○	×
		Setting the human sensor (Applicable to only GT1595-X, GT1585V-S, and GT1585-S)	○	×	×	×
		Adjusting brightness and contrast	○	×	○	×
	Operation	Setting the buzzer volume and window move buzzer	○	○	○	○
		Setting the key sensitivity and key reaction speed	○	—	○	×
		Setting the touch detection mode (Applicable to only GT1595-X)	○	×	×	×
		Changing security levels	○	○	○	×
		Setting the utility call keys	○	○	○	○
		Adjusting the touch panel (Applicable to only GT1595-X)	○	—	×	×
	Q/QnA ladder monitor	Setting the data storage location for the MELSEC-Q/QnA ladder monitor function.(Inapplicable to GT1555-Q and GT1550-Q)	○	—	×	○
	Transparent mode settings	Setting the channel No. to be used for the communication for the FA transparent function	○	—	×	○
	Video/RGB Setting	Setting the video display and RGB display (Applicable to only GT1585V-S and GT1575V-S)	○	—	×	○
	Backup/ restoration setting	Setting the storage locations for backups and backup settings	○	—	×	○

(Continued to next page)

○ : Applicable ×: Not applicable — : Not required

Item		Functions overview	GT15	GT SoftGOT 1000	GT11	Refe-rence
Time setting & display		Selecting a base clock	○	—	○	○
		Displaying and setting the clock current time	○	—	○	×
		Displaying the battery status	○	—	○	×
Program /data control	OS information	Installing or uploading OS, displaying OS property, checking OS data	○	×	○	×
	Project Information	Downloading/uploading/deleting/copying project files, displaying project file property, checking project file data	○	×	○	×
	Alarm information	Deleting or copying alarm log files	○	×	○	×
		Converting alarm log files in G1A format → CSV/TXT format	○	×	×	×
		Displaying graphs of alarm log files	○	×	×	×
	Advanced Recipe information	Converting advanced recipe files in G1P format → CSV/TXT format Deleting/copying/moving advanced recipe files, creating a new advanced recipe file Deleting or moving advanced recipe folders, changing advanced recipe folder names, creating a new advanced recipe folder Writing/reading/matching record data and deleting device values with the advanced recipe record list	○	×	×	×
	Logging information	Converting logging files in G1L format → CSV/TXT format	○	×	×	○
		Deleting/copying/moving logging files, changing logging file names Deleting logging folders, creating a new logging folder	○	×	×	×
	Operation log information	Converting operation log files in G1O format → CSV/TXT format	○	○	×	○
		Deleting/copying/moving operation log files, changing operation log file names Deleting operation log folders, creating a new operation log folder	○	○	×	×
	Hard copy information	Deleting/copying hard copy files, changing hard copy file names	○	×	×	×
	Memory card format	Formatting memory cards	○	×	○	×
	Memory Information	Displaying the available memory of the GOT	○	×	○	×

(Continued to next page)

○: Applicable ×: Not applicable —: Not required

Item		Functions overview	GT15	GT SoftGOT 1000	GT11	Refe-rence
Program /data control	Special data information	Deleting or checking special data files Deleting special data folders Downloading special data stored in the A drive (Standard CF card) or B drive (Extended memory card) to the C drive (Built-in flash memory)	○	×	×	×
	GOT data package acquisition	Copying the OS, special data, and project data to a memory card	○	×	×	×
Debug & self check	Debug	Ladder monitor. (Inapplicable to GT1555-Q and GT1550-Q)	○	×	×	×
		System monitor	○	×	○	×
		A List editor	○	×	○	×
		FX list editor	○	×	○	×
		Intelligent module monitor (Inapplicable to GT1555-Q and GT1550-Q)	○	×	×	×
		Network monitor	○	×	×	×
		Motion monitor for Q series motion controller CPU	○	×	×	×
		Servo amplifier monitor	○	×	×	×
		CNC monitor (Applicable to only GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, and GT1575-S)	○	×	×	×
		Backup/restoration	○	×	×	×
		CNC data I/O (Applicable to only GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, and GT1575-S)	○	×	×	×
		SFC Monitor(Inapplicable to GT1555-Q and GT1550-Q)	○	×	×	×
	Self check	Memory check	○	×	○	×
		Drawing check	○	×	○	×
		Font check	○	×	○	×
		Touch panel check	○	×	○	×
		I/O check	○	×	○	×
		Network unit status display	○	—	○	×
	System alarm display	Displaying or resetting GOT errors Displaying CPU errors and network errors	○	×	○	×
	GOT start time	Displaying the GOT start date and time, current time, and accumulated operating hours	○	×	○	×
	Operator info. management	Adding/editing/deleting operator information, changing passwords Setting the automatic logout time and password expiration date	○	○	×	×
Clean		Displaying the screen for cleaning the display	○	×	○	×

(Continued to next page)

○: Applicable ×: Not applicable —: Not required

Item	Functions overview	GT15	GT SoftGOT 1000	GT11	Refe-rence
Maintenance timing setting	Setting the maintenance notification times for the backlight and display Setting the number of maintenance notifications for touch keys and the built-in flash memory	○	—	×	×
Addition times reset	Resetting accumulated hours and counts for maintenance time notifications	○	—	×	×

*1: The screen saving time cannot be set.

*2: The following display and operations are not allowed with the GT11.

- Chinese (Traditional) cannot be displayed.
- Japanese and Chinese (Simplified) cannot be selected on the GOT screen. (Japanese and Chinese (Simplified) fonts cannot be installed at the same time.)

Appendix 4 Transportation Precautions

When transporting lithium batteries, make sure to treat them based on the transport regulations.

Appendix 4.1 Relevant models

The battery for the GOT1000 Series is classified as shown in the table below.

Product name	Model	Description	Handled as
Battery for GOT1000 Series	GT15-BAT	Lithium battery	Non-dangerous goods

Appendix 4.2 Transportation guidelines

Products are packed properly in compliance with the transportation regulations prior to shipment. When repacking any of the unpacked products to transport it to another location, make sure to observe the IATA Dangerous Goods Regulations, IMDG Code and other local transportation regulations.
For details, please consult your transportation company.

Appendix 5 How to Choose Drive

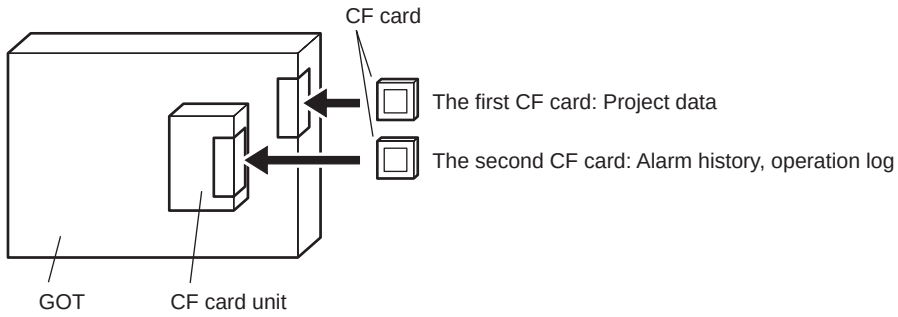
For using a CF card, select the A or B drive according to the following.

(1) A drive
The CF card interface built in the GOT is used as the A drive.

(2) B drive
The following two units can be used as the B drive.
- CF card unit
  When an additional drive is used, use the CF card unit as the B drive of the GOT.
- CF card extension unit
  When an additional drive is used, use the CF card extension unit as the B drive of the GOT.
  Use the unit when a CF card interface is needed on the control panel.

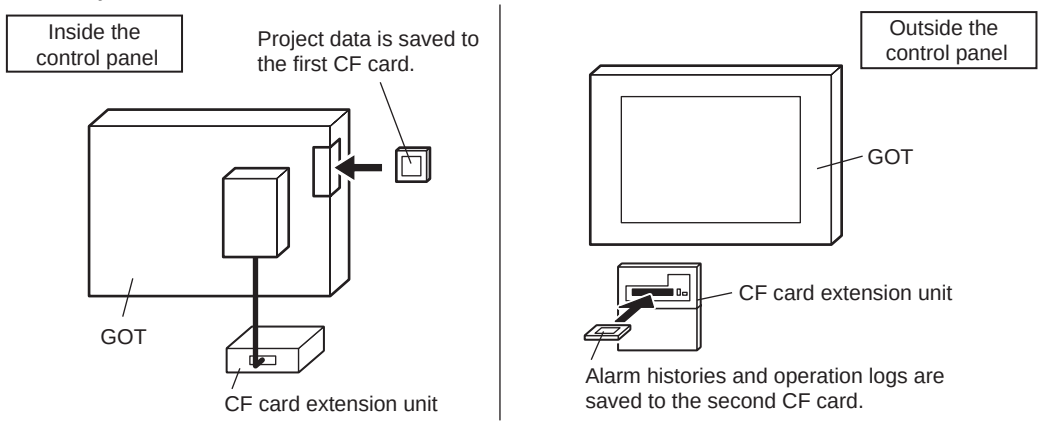
1 Example of how to use CF card unit

Infrequently used data, including project data, are saved to a CF card, and frequently used data, including alarm histories and operation logs, are saved to another CF card. The data can be saved in each CF card.



2 Example of how to use CF card extension unit

The CF card extension unit can be used in the same way as the above "Example of how to use CF card unit".
For using the CF card extension unit, there is no need to open the control panel's door when a CF card is inserted or ejected.



Appendix 6 List of Functions Added by GT Designer2 Version Upgrade (For GOT1000 Series)

The following describes the functions added by version upgrade of the GT Designer2 Version2.77F.
For function comparisons among GOTs, refer to the following.

☞ GT Designer2 Version □ Basic Operation/Data Transfer Manual
(Appendix 3.2 List of Differences between the GOT1000 series and GOT-900 series functions)

For using the following functions, use GT Designer2 or OS of the corresponding version or later.
(Applicable OS versions and communication drivers for GT15, GT SoftGOT1000, and GT11 are different from those for GT10. The added functions for GT10 are listed separately from those for GT15, GT SoftGOT1000, and GT11.)

Point How to use this table

1 provides the versions of GT Designer2 and OS required for each GOT or communication unit.

2 and the following provides description for the functions added with the version upgrade, and the versions of GT Designer2 and OS with which the function is compatible.

Regarding 2 and the following, there may be a case where the function is not supported by a particular type of GOT even when the function is compatible with the version.
In such a case, check the version for the function and the version of the GOT, and use GT Designer2 or OS of the later version.

Appendix 6.1 GT15, GT SoftGOT1000, and GT11

1 Added GOT main unit/Communication unit

Target Models	Version of GT Designer2	Version of OS
GT1595-XTBA	2.18U	Standard monitor OS [02.02.**]
GT1595-XTBD	2.32J	Standard monitor OS [03.00.**]
GT1585-STBD	2.18U	Standard monitor OS [02.02.**]
GT1585V-STBA, GT1585V-STBD	2.32J	Standard monitor OS [03.00.**]
GT1575-STBD	2.18U	Standard monitor OS [02.02.**]
GT1575V-STBA, GT1575V-STBD	2.32J	Standard monitor OS [03.00.**]
GT1575-VTBD	2.18U	Standard monitor OS [02.02.**]
GT1575-VNBA, GT1575-VNBD, GT1572-VNBA, GT1572-VNBD	2.18U	Standard monitor OS [02.02.**]
GT1565-VTBD	2.18U	Standard monitor OS [02.02.**]
GT1562-VNBA, GT1562-VNBD	2.18U	Standard monitor OS [02.02.**]
GT1555-VTBD	2.58L	Standard monitor OS [03.03.**]
GT1555-QTBD, GT1555-QSBD, GT1550-QLBD	2.32J	Standard monitor OS [03.00.**]
GT1155-QTBDQ, GT1155-QSBDQ, GT1155-QTBDA, GT1155-QSBDA GT1150-QLBDQ, GT1150-QLBDA	2.58L	Standard monitor OS [03.03.**]

(Continued to next page)

Target Models	Version of GT Designer2	Version of OS
GT1155-QTBD	2.73B	Standard monitor OS [03.09.**]
GT1155HS-QSBD to GT1150HS-QLBD	2.18U	Standard monitor OS [02.02.**]
GT SoftGOT1000	2.27D	-
GT15-QBUS(2), GT15-ABUS(2), GT15-RS2-9P, GT15-RS4-9S, GT15-RS4-TE	2.18U	Standard monitor OS [02.02.**] Communication driver For communication drivers used in each connection, use [02.02.**] or
GT15-J71GP23-SX	2.77F	Standard monitor OS [03.12.**]
GT15-CFCD	2.43V	Standard monitor OS [03.01.**] BootOS [03.01.**.M]
GT15-CFEX-C08SET	2.45X	Standard monitor OS [03.02.**]
GT15-SOUT	2.58L	Extended function OS Sound Output [03.03.**]
GT15-DIO	2.58L	Extended function OS External I/O / Operation Panel [03.03.**]

2 Added connection types

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Bus connection	Supporting connection to BUS	2.04E	Communication driver Bus(Q)[01.00.**] Bus(A/QnA) [01.00.**]	○	×	×	×
		2.58L	GT15 Communication driver Bus(Q) [03.03.**] Bus(A/QnA) [03.03.**] GT11 BootOS [03.03.**.P] Standard monitor OS [03.03.**] Communication driver Bus(Q) [03.03.**] Bus(A/QnA) [03.03.**]	○	○	○	×
	Supporting connection to Q172HCPU, Q173HCPU	2.09K	Communication driver Bus(Q) [01.02.**]	○	×	○	×
	Priority order of data load can be set.	2.43V	Communication driver Bus connection Q [03.01.**]	○	×	○	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver Bus connection Q [03.07.**]	○	○	○	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver Bus connection Q [03.09.**]	○	○	○	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Direct connection to CPU	Supporting connection to Q172HCPU, Q173HCPU	2.09K	Communication driver A/QnA/QCPU,QJ71C24 [01.02.**]	○	×	×	○
	Supporting connection to FX3U series	2.18U	Communication driver MELSEC-FX[02.02.**]	○	○	×	○
	Supporting automatic system switching for QCPU redundant system	2.32J	Communication driver A/QnA/QCPU, QJ71C24, MELDAS C6* [03.00.**]	○	○	×	○
	Communication driver name has been changed.	2.43V	Communication driver A/QnA/QCPU, QJ71C24 [03.01.**]	○	×	×	○
	Supporting connection to Universal model QCPU	2.63R	Communication driver A/QnA/QCPU,QJ71C24, MELDASC6*[03.07.**]	○	○	×	○
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver A/QnA/QCPU, QJ71C24 [03.09.**]	○	○	×	○
	Supporting settings for the number of retries, the timeout time, and delay time		Communication driver A/QnA/QCPU, QJ71C24 [03.09.**] MELSEC-FX[03.09.**]	○	×	×	○
Computer link connection	Supporting connection to Q172HCPU, Q173HCPU	2.09K	Communication driver A/QnA/QCPU,QJ71C24 [01.02.**]	○	×	×	○
	Communication driver name has been changed.	2.43V	Communication driver A/QnA/QCPU, QJ71C24 [03.01.**] AJ71QC24, MELDAS C6* [03.01.**]	○	×	×	○
	Supporting connection to Universal model QCPU	2.63R	Communication driver A/QnA/QCPU,QJ71C24, MELDASC6*[03.07.**]	○	○	×	○
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						
	Supporting connection to CRnQ-700	2.73B	Communication driver A/QnA/QCPU, QJ71C24 [03.09.**]	○	○	×	○
	Supporting settings for the number of retries, the timeout time, and delay time		Communication driver A/QnA/QCPU, QJ71C24 [03.09.**] AJ71QC24, MELDAS C6* [03.09.**] AJ71C24/UC24[03.09.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
MELSECNET/H connection (PLC to PLC network)	Supporting connection to MELSECNET/H (PLC to PLC network)	2.25B	-	×	○	×	×
		2.32J	Communication driver MELSECNET/H [03.00.**]	○	○	×	×
	Supporting routing parameter setting with GT Designer2.	2.43V	Communication driver MELSECNET/H [03.01.**]	○	×	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver MELSECNET/H[03.07.**]	○	○	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver MELSECNET/H[03.09.**]	○	○	×	×
MELSECNET/10 connection (PLC to PLC network)	Supporting connection to MELSECNET/10 PLC to PLC connection)	2.09K	Communication driver MELSECNET/10 [01.02.**]	○	○	×	×
	Supporting connection to Q172HCPU, Q173HCPU				×		
	Supporting automatic system switching for QCPU redundant system	2.32J	Communication driver MELSECNET/10 [03.00.**]	○	○	×	×
	Supporting routing parameter setting with GT Designer2.	2.43V	Communication driver MELSECNET/H [03.01.**]	○	×	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver MELSECNET/H[03.07.**]	○	○	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting connection to CRnQ-700	2.73B	Communication driver MELSECNET/H[03.09.**]	○	○	×	×
CC-Link IE controller network connection	Supporting connection to CC-Link IE controller network	2.77F	Communication driver CC-Link IE Controller Network[03.12.**]	○	○	×	×
CC-Link connection (Intelligent device station)	Supporting connection to CC-Link (Intelligence device station)	2.09K	Communication driver CC-LINK(ID) [01.02.**]	○	×	×	×
	Supporting connection to Q172HCPU, Q173HCPU						
	Supporting connection to CC-Link Ver.2	2.32J	Communication driver CC-Link Ver2 (ID) [03.00.**]	○	×	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver CC-Link Ver2 (ID) [03.07.**]	○	×	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						
	Supporting connection to CRnQ-700	2.73B	Communication driver CC-Link Ver2 (ID) [03.09.**]	○	×	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
CC-Link connection (Via G4)	Supporting connection to CC-Link (Via G4)	2.09K	Communication driver CC-LINK(G4) [01.02.**]	○	×	×	○
	Supporting connection to Q172HCPU, Q173HCPU						
	Supporting connection to Universal model QCPU	2.63R	Communication driver CC-Link(G4)[03.07.**]	○	×	×	○
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						
	Supporting connection to AJ65BT-R2N	2.73B	Communication driver CC-Link(G4)[03.09.**]	○	×	×	○
	Supporting connection to CRnQ-700						
	Supporting settings for the number of retries, the timeout time, and delay time						
Ethernet connection	Supporting connection to the Ethernet	2.09K	Communication driver QJ71E71/AJ71(Q)E71 [01.02.**]	○	○	×	×
	Supporting connection to Q172HCPU, Q173HCPU				×		
	Supporting automatic system switching for QCPU redundant system	2.32J	Communication driver QJ71E71/AJ71(Q)E71 [03.00.**]	○	○	×	×
	Supporting routing parameter setting with GT Designer2.	2.43V	Communication driver QJ71E71/AJ71(Q)E71 [03.01.**]	○	○	×	×
	Supporting connection to Universal model QCPU	2.63R	Communication driver AJ71F71/AJ71(Q)F71, Q17nNC[03.07.**]	○	○	×	×
	Supporting connection to Q17nDCPU						
	Supporting connection to CNC C70						
	Supporting the redundant system with the redundant type extension base unit						
	Supporting the redundant system with the remote I/O station of the MELSECNET/H network system				×		
	The communication driver name is changed.	2.73B	Communication driver QJ71E71/AJ71(Q)E71,A17nNC, CRnD-700 [03.09.**]	○	×	×	×
	Supporting connection to CRnQ-700 and CRnD-700			○	○	×	×
MODBUS® /TCP	Supporting connection to the MODBUS® /TCP	2.73B	Communication driver MODBUS/TCP [03.09.**]	○	×	×	×
OMRON PLC connection	Extended device range monitored (The setting of TIM or CNT up to 4095, etc.)	2.09K	Communication driver OMRON SYSMAC [01.02.**]	○	○	×	○
	Supporting delay time setting	2.27D	Communication driver OMRON SYSMAC [02.04.**]	○	×	×	○
	Supporting the settings of Retry and Timeout Time.	2.43V	Communication driver OMRON SYSMAC [03.01.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
KEYENCE PLC connection	Supporting connection to KEYENCE PLC	2.18U	Communication driver KEYENCE KV700/1000 [02.02.**]	○	×	×	○
	Supporting connection to KV-3000 and KV-5000	2.77F	Communication driver KEYENCE KV700/1000 [03.12.**]	○	×	×	○
SHARP PLC connection	Supporting connection to SHARP PLC	2.09K	Communication driver SHARP JW [01.02.**]	○	×	×	○
	Supporting settings for the number of retries and the timeout time	2.73B	Communication driver SHARP JW [03.09.**]	○	×	×	○
TOSHIBA PLC connection	Supporting connection to TOSHIBA PLC	2.09K	Communication driver TOSHIBA PROSEC T/V [01.02.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver TOSHIBA PROSEC T/V [03.09.**]	○	×	×	○
	Supporting connection to model2000(S2T)	2.77F	Communication driver TOSHIBA PROSEC T/V [03.12.**]	○	×	×	○
TOSHIBA MACHINE PLC connection	Supporting connection to TOSHIBA MACHINE PLC	2.77F	Communication driver TOSHIBA MACHINE TCmini [03.12.**]	○	×	×	○
JTEKT PLC connection	Supporting connection to JTEKT PLC	2.32J	Communication driver JTEKT TOYOPUC-PC [03.00.**]	○	×	×	○
HITACHI IES PLC connection	Supporting connection to HITACHI PLC	2.09K	Communication driver HITACHI HIDIC H [01.02.**] HITACHI HIDIC H (Protocol 2) [01.02.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver HITACHI HIDIC H [03.09.**] HITACHI HIDIC H (Protocol 2) [03.09.**]	○	×	×	○
HITACHI PLC connection	Supporting connection to HITACHI PLC	2.43V	Communication driver HITACHI S10mini/S10V [03.01.**]	○	×	×	○
FUJI FA PLC connection	Supporting connection to FUJI FA PLC	2.43V	Communication driver FUJI MICREX-F [03.01.**]	○	×	×	○
MATSUSHITA PLC connection	Supporting connection to MATSUSHITA PLC	2.09K	Communication driver MATSUSHITA MEWNET-FP [01.02.**]	○	×	×	○
	Supporting connection to FP-Σ	2.18U	Communication driver MATSUSHITA MEWNET-FP [02.02.**]	○	×	×	○
	Supporting connection to FP-X	2.58L	Communication driver MATSUSHITA MEWNET-FP [03.03.**]	○	×	×	○
	The device range applicable to monitoring is extended. (Up to 991F for R and up to 911 for WR can be set.)			○	×	×	○
	Supporting settings for the timeout time and the delay time	2.73B	Communication driver MATSUSHITA MEWNET-FP [03.09.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
YASKAWA PLC connection	Supporting connection to MP2000 and MP3000	2.47Z	Communication driver YASKAWA GL/CP9200(SH/H)/ CP9300MS [03.02.**]	○	×	×	○
	Supporting the Ethernet connection	2.47Z	Communication driver Ethernet(YASKAWA) [03.02.**]	○	○	×	×
	Supporting settings for the number of retries and the timeout time	2.73B	Communication driver YASKAWA GL/CP9200(SH/H)/ CP9300MS [03.09.**]	○	×	×	○
	Supporting connection to CP-312	2.77F	Communication driver Ethernet(YASKAWA) [03.12.**]	○	×	×	×
YOKOGAWA PLC connection	Supporting connection to STARDOM	2.32J	Communication driver YOKOGAWA FA500/FA-M3/ STARDOM [03.00.**]	○	×	×	○
	Supporting the Ethernet connection	2.47Z	Communication driver Ethernet(YOKOGAWA) [03.02.**]	○	○	×	×
	Supporting connection to the MODBUS® /TCP	2.73B	Communication driver MODBUS/TCP [03.09.**]	◌	×	×	×
ALLEN-BRADLEY PLC connection	Can use L device by MicroLogix 1000/ 1200/1500 series	2.18U	Communication driver AB MicroLogix [02.02.**]	○	×	×	○
	Supporting connection to Control/ CompactLogix	2.58L	Communication driver AB Control/CompactLogix [03.03.**]	○	×	×	○
	Supporting the Ethernet connection	2.63R	Communication driver EtherNet/IP(AB)[03.07.**]	○	×	×	×
SCHNEIDER PLC connection	Supporting connection to the MODBUS® /TCP	2.73B	Communication driver MODBUS/TCP [03.09.**]	◌	×	×	×
SIEMENS PLC connection	Supporting connection to SIEMENS S7-200 series	2.18U	Communication driver SIEMENS S7-200 [02.02.**]	○	×	×	○
Microcomputer connection	Supporting XON/XOFF control	2.32J	Communication driver Computer [03.00.**]	○	×	×	○
	Supporting interrupt extension						
OMRON temperature controller connection	Supporting connection to OMRON temperature controller	2.18U	Communication driver OMRON THERMAC / INPANEL NEO [02.02.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added.	2.58L	Communication driver OMRON THERMAC/INPANEL NEO [03.03.**]	○	×	×	○
SHINKO indicating controller connection	Supporting connection to SHINKO indicating controller	2.43V	Communication driver Shinko Technos Controller [03.01.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver Shinko Technos Controller [03.03.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT15	GT Soft GOT1000	GT11	
						Bus	Serial
CHINO controller connection	Supporting connection to CHINO controller	2.58L	Communication driver CHINO Controllers(MODBUS) [03.03.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added						
FUJI SYS temperature controller connection	Supporting connection to FUJI SYS temperature controller	2.32J	Communication driver FUJI PXR/PXG/PXH [03.00.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver FUJI PXR/PXG/PXH [03.03.**]	○	×	×	○
YAMATAKE temperature controller connection	Supporting connection to YAMATAKE temperature controller	2.18U	Communication driver YAMATAKE SDC/DMC [02.02.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver YAMATAKE SDC/DMC [03.03.**]	○	×	×	○
YOKOGAWA temperature controller connection	Supporting connection to YOKOGAWA temperature controller	2.43V	Communication driver YOKOGAWA GREEN/UT100/ UT2000 [03.01.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added	2.58L	Communication driver YOKOGAWA GREEN/UT100/ UT2000 [03.03.**]	○	×	×	○
RKC temperature controller connection	Supporting connection to RKC temperature controller	2.18U	Communication driver RKC SR Mini HG(MODBUS) [02.02.**]	○	×	×	○
	Supporting connection to SRZ	2.58L	Communication driver RKC SR Mini HG(MODBUS) [03.03.**]	○	×	×	○
	The functions to automatically stop monitoring faulty stations and to disconnect communications with controllers are added						
Inverter connection	Supporting connection to inverter	2.18U	Communication driver FREQROL 500/700 [02.02.**]	○	×	×	○
	Setting range for Timeout Time has been changed. (3 to 30 seconds → 1 to 30 seconds)	2.43V	Communication driver FREQROL 500/700 [03.01.**]	○	×	×	○
	Supporting connection to E700 series and V500/V500L series	2.63R	Communication driver FREQROL 500/700[03.07.**]	○	×	×	○
Servo amplifier connection	Supporting connection to servo amplifier	2.09K	Communication driver MELSERVO-J2S/M [01.02.**]	○	×	×	○
	Supporting connection to MELSERVO-J3 series	2.18U	Communication driver MELSERVO-J3,J2S/M [02.02.**]	○	×	×	○
	Supporting connection to MR-J3-*T series	2.63R	Communication driver MELSERVO-J3, J2S/M [03.07.**]	○	×	×	○
	Supporting writing to the E^2PROM area in parameter writing	2.32J	Communication driver MELSERVO-J3, J2S/M [03.00.**]	○	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT11	
						Bus	Serial
Servo amplifier connection	Supporting the point table setting for MR-J2S-*CP	2.32J	Communication driver MELSERVO-J3, J2S/M [03.00.**]	○	×	×	○
	Supporting the test run mode	2.32J	Communication driver MELSERVO-J3, J2S/M [03.00.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver MELSERVO-J3, J2S/M [03.09.**]	○	×	×	○
Robot controller connection	Supporting connection to robot controller	2.77F	Communication driver QJ71E71/AJ71(Q)E71,Q17nNC, CRnD-700 [03.12.**]	○	○	×	×
CNC connection (MELDAS C6/ C64)	Supporting connection to CNC (MELDAS C6/C64 series)	2.18U	Communication driver A/QnA/QCPU, QJ71C24, MELDAS C6* [02.02.**] A/QnAQJ71E71/AJ71(Q)E71 [02.02.**] MELSECNET/10 [02.02.**] CC-Link(ID) [02.02.**]	○	○	×	○
	Communication driver name has been changed.	2.43V	Communication driver AJ71QC24, MELDAS C6* [03.01.**]	○	×	×	○
	Supporting settings for the number of retries, the timeout time, and delay time	2.73B	Communication driver AJ71QC24, MELDAS C6* [03.09.**]	○	×	×	○
	Communication driver name has been changed.		Communication driver QJ71E71/AJ71(Q)E71,Q17nNC, CRnD-700 [03.09.**]	○	×	×	×
Bar code reader connection	Supporting connection to barcode reader	2.09K	Extended function OS Barcode [01.02.**]	○	×	○	○
	Supporting connection to 2D-code reader	2.27D	Extended function OS Barcode [02.04.**]	○	×	○	○
Printer connection	Supporting connection to printer	2.27D	Extended function OS Printer [02.04.**]	○	×	×	×
FA transparent	Supporting the FA transparent function via USB	2.09K	GT15 Standard monitor OS [01.02.**] GT11 Standard monitor OS [01.02.**] Boot OS [01.02.**.C]	○	×	○	○
	MT Developer (via USB), MR Configurator and FR Configurator are added as compatible software.	2.27D	Standard monitor OS [02.04.**]	○	×	○	○
	GX Configuration and PX Developer are added as compatible software.	2.32J	Standard monitor OS [03.00.**]	○	×	○	○
Multiple-GT11 connection	Connection with multiple GT11s	2.09K	Standard monitor OS [01.02.**]	×	×	○	○
External I/O device connection	Supporting connection to external I/O devices	2.58L	Extended function OS External I/O / Operation Panel [03.03.**]	○	×	×	×
RFID connection	Supporting connection to the RFID controller	2.73B	Extended function OS RFID [03.09.**]	○	×	○	○

3 Added GT Designer2 functions

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Ethernet download	Downloading the project data via Ethernet	2.09K	Standard monitor OS [01.02.**]	○	×	×
Basic comment, comment group	Copying comments in column unit on Basic Comment or Comment Group, etc.	2.09K	-	○	○	○
	Enables editing the comment group directly in settings for lamps and touch switches.	2.77F	-	○	○	○
Library workspace	Improved library structure and added import function	2.09K	-	○	○	○
	Improved user library structure, expanded the user library registration capacity, copying the figure data to the user library, etc.	2.18U	-	○	○	○
	Addition of fixed frame figure	2.18U	-	○	○	○
	Enables setting the background color of the figures in the Library Editor screen.	2.47Z	-	○	○	○
	Enables sorting the figure data by subject or function and displaying different-shaped figures in the same color in the image list.	2.58L	-	○	○	○
	Real type data are added to the subject in the library.	2.63R	-	○	○	○
Project data matching	Matching project data stored in GOT and project data opened on GT Designer2	2.09K	Standard monitor OS [01.02.**]	○	○	○
Copy ON → OFF Copy OFF → ON	Enables copying of only characters in lamp display, touch switch and comment display.	2.18U	-	○	○	○
	Enables copying of only comment No. in bit lamp, touch switch, and comment display(bit).	2.73B	-	○	○	○
Import, Export	Enables editing of the settings for advanced alarm observation (advanced user alarm), alarm history, advanced recipe function and recipe function in the CSV file format and other format.	2.18U	-	○	○	○
	Items that can be imported or exported with the advanced alarm observation and alarm history are added. (Device No., comment No., detail No., and others)	2.77F	-	○	○	×
Print	Enables printing of header and footer	2.18U	-	○	○	○
Data View	Enables changing of the settings for the respective objects in grouped objects	2.18U	-	○	○	○
Batch Edit	Enables global replacement of channel No.	2.18U	-	○	○	×
Screen Preview	Enables checking for security level switching and language switching in image after switching	2.18U	-	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Wizard	Wizard for setting the GOT type, controller type and communication settings when creating a new project	2.18U	-	○	○	○
Screen script, project script	Settings on the Script Edit dialog are available for screen script and project script.	2.27D	-	○	○	×
Auxiliary setting	Setting of maintaining screen numbers of the screens being displayed (System Information) during screen switching is added.	2.27D	-	○	○	○
Expansion / Reduction	Supports expansion/reduction when multiple objects and shapes are selected.	2.32J	-	○	○	○
	Supports automatically zooming in and out objects and figures suitable for the screen size when the GOT type is changed to a GOT type with different resolution.	2.73B	-	○	○	○
Screen capture	Function for capturing the specified range and loading to GT Designer2	2.43V	-	○	○	○
Zoom	• Interval of magnification specification has been changed. • +/- buttons have been added. • Zoom in/zoom out operations using the " Ctrl key" and "Mouse wheel" have been added.	2.43V	-	○	○	○
Communication	Holds the previous downloaded drive.	2.47Z	-	○	×	○
	• Enables updating BootOS without the standard monitor OS updated when only BootOS is already installed on the GOT. • Enables installing the standard monitor OS with the communication driver at once when only BootOS is already installed on the GOT.	2.58L	BootOS [03.03.**.P]	○	×	○
	Enables installing OSs on the A drive with the OS boot drive set to the A drive.	2.73B	-	○	×	×
Preferences	Enables setting the maximum number of screens to be displayed on GT Designer2.	2.63R	-	○	○	○
Device list	Functions of the collection target selection, jump, file output, and others are added.	2.73B	-	○	○	○
Reading BMP or JPEG image data	Enables displaying BMP or JPEG image data reduced to a resolution of 2000 × 1600 or less on GT Designer2.	2.77F	-	○	○	○

4 Added common settings/object functions

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Figure	JPEG file reading enabled	2.09K	Standard monitor OS [01.02.**]	○	○	×
	Function to import IGES format data.	2.43V	-	○	○	○
	Enables adjusting image qualities for reading JPEG files.	2.47Z	-	○	○	×
	Supporting piping	2.73B	Standard monitor OS [03.00.**]	○	○	○
Text	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	◌	◌	◌
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	◌	◌	×
	Enables specifyng of background color.	2.32J	Standard monitor OS [03.00.**]	○	○	○
Standard font	• Japanese 12dot • Japanese 16dot Gothic • Japanese 16dot Mincho	2.04E	Standard monitor OS [01.01**]	○	○	○
	• Japanese (supporting Europe) 12dot • Japanese (supporting Europe) 16dot Gothic • Japanese (supporting Europe) 16dot Mincho • Chinese (Simplified) 12dot • Chinese (Simplified) 16dot Mincho • Chinese (Simplified) (supporting Europe) 12dot • Chinese (Simplified) (supporting Europe) 16dot Mincho	2.27D	Standard monitor OS [02.04.**] Boot OS [G]	○	○	○
Stroke font	Enables setting the KANJI region.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
	Supporting Thai	2.47Z	Standard monitor OS [03.02.**]	○	○	×
	The following font name is changed. • Stroke Standard Font(JPN) • The following fonts are added. • Stroke Standard Font(China GB) • Stroke Standard Font(China GB)(supporting Hangul)	2.58L	Extended function OS Stroke Standard Font [03.03.**]	○	×	×
	The following font is added. • Stroke Font(JPN)	2.58L	Option OS Stroke Font(JPN) [03.03.**]	○	×	×
KANJI Region	Supporting Chinese (Traditional)	2.18U	Standard monitor OS [02.02.**] Option OS Standard Font (China Big5) [02.02.**]	○	○	×
GOT internal device	System alarm information, printer status information, and GT SoftGOT1000 end device are added.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	The devices for the trigger buffer of the MES interface are added.	2.47Z	Standard monitor OS [03.02.**] Option OS MES Interface [03.02.**]	○	×	×
GOT Type	Supporting vertical installation type display	2.18U	Standard monitor OS [02.02.**]	×	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Screen switching function	"ON" and "OFF" can be set.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Station No. Switching Function	Designation of the channel No. for which station No. is switched is possible.	2.18U	Standard monitor OS [02.02.**]	○	×	×
Language Switching Device	Language switching device can be used.	2.00A	Standard monitor OS [01.00.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
Password Setting	Password can be set for the connection of motion controller and servo amplifier.	2.18U	Standard monitor OS [02.02.**]	○	×	○
System information	System information of report function and print are added.	2.27D	Standard monitor OS [02.04.**]	×	×	○
	D drive automatic recovery status notification signal is added.	2.32J	Standard monitor OS [03.00.**]	×	×	○
	System information regarding B drive has been added.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Security	The name [Password] is changed to [Security] in the system environment.	2.58L	Standard monitor OS [03.03.**]	○	○	×
	Enables setting the operator authentication.	2.58L	Extended function OS Operator authentication [03.03.**]	○	○	×
GOT Setup	In clock management, both adjust and broadcast can be set.	2.18U	Standard monitor OS [02.02.**]	○	×	○
	Data save device of MELSEC-Q / QnA ladder monitor data can be set at GT Designer2.	2.18U	-	○	×	×
	Automatic program read at the start of ladder monitor for MELSEC-Q/QnA/ Priority Level Comment can be set.	2.43V	-	○	×	×
	Time setting for call key ON until the start up of utility can be set (for 1-point pressing).	2.18U	Standard monitor OS [02.02.**]	○	×	×
	Alarm can be set to be displayed in system language switching or battery drops.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Enables the backup/restore setting.	2.58L	-	○	×	×
	Enables the setting for monitoring local devices.			○	×	×
	Enables setting the drive for collectively reading comment data.			○	×	×
	Enables settings for the backup trigger setting and the maximum number of backup data.	2.73B	-	○	×	×
Clock Setting	Designation of the channel No. used for adjusting and broadcasting is possible.	2.18U	Standard monitor OS [02.02.**]	○	×	×
Startup Logo	Function for setting any screen for the GOT startup screen	2.09K	Standard monitor OS [01.02.**] Boot OS [01.02.**.C]	○	○	○
	Enables displaying a BMP data stored in the A drive as the startup logo when the OS boot drive is set to the A drive.	2.73B	Boot OS [03.09.**.S]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Handy GOT Setting	Setting of the grip switch LED of handy GOT	2.18U	Standard monitor OS [02.02.**]	×	×	○
Dialog window	System messages to be displayed on GOT can be customized or created by the user.	2.27D	Standard monitor OS [02.04.**]	○	×	○
Operation log	Function to save the GOT operation performed by the user as a history	2.32J	Standard monitor OS [03.00.**] Option OS Operation Log [03.00.**]	○	○	×
	Function for converting multiple files	2.43V	-	○	○	×
	The binary format file output can be converted to CSV/Unicode format file by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Enables saving the operation log for the operator authentication.	2.58L	Standard monitor OS [03.03.**] Option OS Operation Log [03.03.**] Extended function OS Operator authentication [03.03.**]	○	○	×
Comment	Comment group can be used.	2.00A	Standard monitor OS [02.02.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
Part	Enables setting the background color of the figures in the Parts Editor screen.	2.47Z	-	○	○	○
Key Window	User defined key window display can be switched in synchronization with the language switching device.	2.18U	Standard monitor OS [02.02.**]	○	○	○
	In the user defined key window, input range (maximum value) and input range (minimum value) are displayed.	2.18U	Standard monitor OS [02.02.**]	○	○	○
Device setting	65 or later station numbers in the MELSECNET/G network system can be set with using Universal model QCPU as a relay station.	2.63R	Standard monitor OS [03.07.**]	○	○	×
Object rename	Function to allow setting of object name	2.32J	Standard monitor OS [03.00.**]	○	○	○
Lamp	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	○	○	×
	Figure created as a part can be used to a lamp.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[Comment Group] can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Enables specifying the transparent color of a figure when using an image file as a figure.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
Touch switch	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	○	○	○
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Figure created as a part can be used to a touch switch.	2.43V	Standard monitor OS [03.01.**]	○	○	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Touch switch	Data change switch can be used.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	[Comment Group] can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[Adjust Text Size] setting is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Auto repeat can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	The toutch switch on the ladder monitor with device search function can be used.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[PX Developer Function call] is added to [Switch Action] of the special function switch.	2.47Z	Standard monitor OS [03.02.**]	×	○	×
	Enables specifying the transparent color of a figure when using an image file as a figure.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
	[FX List Monitor], [Operator Information Management], [Log-in/Log-out (Operator Authentication)], [Password Change (Operator Authentication)], and [Backup/ Restore] are added to [Switch Action] of the special function switch.	2.58L	Standard monitor OS[03.03.**]	○	○	×
	The name [Password] is changed to [Password (Security Level)] in [Switch Action] of the special function switch.			○	○	○
	[CNC Data Input/Output] is added to [Switch Action] of the special function switch.	2.63R	Standard monitor OS [03.07.**]	○	×	○
	[SFC Monitor] is added to [Switch Action] of the special function switch.	2.77F	Standard monitor OS [03.12.**]	○	×	○
Numerical Display/ Numerical input	Setting to display input value when entering the value at input target object position is possible.	2.32J	Standard monitor OS [03.00.**]	○	×	×
	Format String setting is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
ASCII Display / ASCII Input	Function to store NULL (0x00) at the end of input characters	2.18U	Standard monitor OS [02.02.**]	○	○	○
	Function to convert characters input in Kana into Kanji	2.18U	Standard monitor OS [02.02.**] Option OS KANA KANJI (JP) [02.02.**]	○	○	×
	Alignment setting is added.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Setting for displaying an input value at the input target object position is possible.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Data List	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Comment Display	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	The simple comment is added.	2.77F	Standard monitor OS [03.12.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
User alarm	Number of alarms settable for GT11 is extended to the same as GT15 (Up to 8192 alarms).	2.27D	Standard monitor OS [02.04.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Alarm history	Number of alarms settable for GT11 is extended to the same as GT15 (Up to 3072 alarms).	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to save alarm history data to the A drive (standard CF card) for GT11	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to display the cursor by touching an alarm, and function to output the corresponding comment No. to a device	2.32J	Standard monitor OS [03.00.**]	○	○	○
	The comment group application	2.73B	Standard monitor OS [03.09.**]	○	○	○
Scrolling alarm display	The scrolling alarm display applicable	2.73B	Standard monitor OS [03.09.**]	×	×	○
Advanced Alarm	Function for detecting alarm even at the fall of bit device with Advanced User Alarm	2.09K	Standard monitor OS [01.02.**]	○	○	×
	Function to display a cursor by touching an alarm and to output the corresponding comment No. to a device.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	The binary format file output can be converted to CSV/Unicode format file by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Parts Display/ Parts Movement	Function for using BMP/JPEG data in memory card as parts	2.09K	Standard monitor OS [01.02.**]	○	○	×
	Settings for BMP/JPEG file parts can be made on each object.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	Enables specifying the transparent color of a figure when using an image file as a figure.	2.47Z	Standard monitor OS [03.02.**]	○	○	×
Panelmeter	Windows® fonts applicable	2.09K	Standard monitor OS [01.02.**]	◯	◯	◯
	Stroke font applicable	2.43V	Standard monitor OS [03.01.**]	◯	◯	×
	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Meter Attribute and Core can be set.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Level	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Trend graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Line graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Bar graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Statistics graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
	When Bit Trigger is not met, whether to enable "Hold Display" can be selected.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Scatter graph	Up to 101 points can be set for scale, value number.	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Function to collect data only when display trigger is met is added.	2.32J	Standard monitor OS [03.00.**]	○	○	○
Historical Trend Graph	Function to display the data collected by the logging function in trend graph format	2.18U	Standard monitor OS [02.01.**]	○	○	×
Time Action	Second specification and external control are possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
Logging Function	Function to collect and accumulate device values	2.18U	Standard monitor OS [02.02.**] Option OS Logging [02.02.**]	○	○	×
	Function for converting multiple files	2.43V	-	○	○	×
	The binary/CSV/Unicode format files output can be stored to another folder by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Device data transfer function	Function to read the device value and write in the other device when the trigger condition is satisfied.	2.73B	Extended function OS Device data transfer [03.09.**]	○	×	×
Recipe function	Number of devices settable for one recipe in GT11 is extended to the same as GT15 (Up to 8192 devices).	2.27D	Standard monitor OS [02.04.**] Option OS Recipe [02.04.**]	○	○	○
	Function to save recipe data of GT11 in CSV file format	2.27D	Standard monitor OS [02.04.**] Option OS Recipe [02.04.**]	○	○	○
	Function to save recipe data to the A drive (standard CF card) for GT11	2.27D	Standard monitor OS [02.04.**] Option OS Recipe [02.04.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Advanced Recipe	The extended function of the existing recipe function	2.09K	Standard monitor OS [01.02.**] Option OS Advanced recipe [01.02.**]	○	○	×
	Function for converting multiple files	2.43V	-	○	○	×
	The binary format file output can be converted to CSV/Unicode format file by external control.	2.43V	Standard monitor OS [03.01.**]	○	○	×
	The number of records that can be set is changed to 2000.	2.58L	Standard monitor OS [03.03.**] Option OS Advanced Recipe [03.03.**]	○	○	×
Report function	Function to print the colleted data	2.27D	Standard monitor OS [02.04.**] Extended function OS Report [02.04.**]	○	○	×
Hard copy function	Compatible with the printer output	2.27D	Standard monitor OS [02.04.**] Extended function OS Printer [02.04.**]	○	×	×
	Thumbnail Output can be set.	2.43V	Standard monitor OS [03.01.**]	○	○	×
Operation panel function	Enables setting the operation panel.	2.58L	Extended function OS External I/O / Operation Panel [03.03.**]	○	×	×
Sound output function	Enables setting the sound output.	2.58L	Extended function OS Sound Output [03.03.**]	○	○	×
Barcode	Function for loading the data read with bar cord reader to PLC CPU	2.09K	Standard monitor OS [01.00.**]	○	×	○
	Number of settable devices is extended from 32 to 1024 points.	2.27D	Standard monitor OS [02.04.**]	○	×	○
	Space (0x20) or NULL (0x00) can be selected for blank device.	2.27D	Standard monitor OS [02.04.**]	○	×	○
RFID function	Function to write in the devices which data are read by the RFID reader/writer.	2.73B	Extended function OS RFID [03.09.**]	○	×	○
Video display	Function to display an image taken by a video camera on the GOT	2.32J	Standard monitor OS [03.00.**] Extended function OS Video/RGB [03.00.**]	○	×	×
RGB display	Function to display the personal computer screen on the GOT	2.32J	Standard monitor OS [03.00.**] Extended function OS Video/RGB [03.00.**]	○	×	×
Set overlay screen	Number of screens that can be called on GT11 is extended to the same as GT15 (Up to 2047 screens).	2.27D	Standard monitor OS [02.04.**]	○	○	○
	Screen calling setting with dragging is possible.	2.43V	-	○	○	○
	Specifying of placement position (Front/Back) for the basic and called screens is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	○
	[Disable background colors of overlay screen when setting an overlay screen] can be set.	2.58L	Standard monitor OS [03.03.**]	○	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Test function	Function for changing device value with displaying test window.	2.09K	Standard monitor OS [02.02.**]	○	×	○
Project Script	Function to execute scripts in unit of project file	2.00A	Standard monitor OS [01.00.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
	Word device values can be converted into data in the specified data type, and the GOT can read or write the data. (Data type conversion function)	2.73B	Standard monitor OS [03.09.**]	○	○	○
	The file operation functions are added.	2.77F	Standard monitor OS [03.12.**]	○	○	○
Screen Script	Function to execute scripts in unit of screen	2.00A	Standard monitor OS [01.00.**]	○	○	×
		2.18U	Standard monitor OS [02.02.**]	○	○	○
	Word device values can be converted into data in the specified data type, and the GOT can read or write the data. (Data type conversion function)	2.73B	Standard monitor OS [03.09.**]	○	○	○
	The file operation functions are added.	2.77F	Standard monitor OS [03.12.**]	○	○	○
Object Script	Function to execute scripts in unit of object	2.18U	Option OS Object Script [02.02.**]	○	○	×
Key Code	Key codes for increment key and decrement key are added.	2.18U	Standard monitor OS [02.02.**]	○	○	○
	Key code for historical trend graph is added.	2.18U	Standard monitor OS [02.02.**]	○	○	×
	Key code used for Kana Kanji conversion is added.	2.18U	Standard monitor OS [02.02.**]	○	○	×
	Key codes for user ID ascending/ descending order movement of cursor are added.	2.27D	Standard monitor OS [02.04.**]	○	○	○

5 Other functions added

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Utility	Displays details in OS information, project information, alarm information, hard copy information and advance recipe information properties.	2.18U	Standard monitor OS [02.02.**]	○	×	○
Network unit status display	Function to display the status of MELSECNET/H communication unit and CC-Link communication unit	2.32J	Standard monitor OS [03.00.**]	○	○	×
GOT data package acquisition	Function for copying the installed OS or data in the GOT main unit to the memory card	2.43V	Standard monitor OS [03.01.**] BootOS [03.01.**.M]	○	×	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Unlimited installation of extended function OSs and option OSs	Extended function OS and option OS can be installed unlimitedly. Extended function OS and option OS can be operated up to 21. (Conventionally, both of above OSs can be installed and operated up to 9. The extended function OS data size is twice as large as other OS data. The logging OS data size is three times as large as other OS data.)	2.18U	BootOS [02.02.**.E]	○	×	×
	Extended function OS and option OS can be operated up to 32. (The extended function OS data size is twice as large as other OS data. The logging OS data size is three times as large as other OS data.)	2.73B	BootOS [03.09.**.S]	○	×	×
Built-in option function board	GT15-FNB built in the GOT is enabled.	2.58L	BootOS [03.03.**.P] Standard monitor OS [03.03.**]	○	×	×
System monitoring function	Function for monitoring/testing device of PLC CPU or buffer memory of intelligent function module	2.09K	Extended function OS System monitor [01.02.**]	○	×	○
	Supporting display of Chinese (Simplified/ Traditional), German, Korean	2.27D	Extended function OS System monitor [02.04.**]	○	×	○
	Supporting connection to Universal model QCPU	2.63R	Extended function OS System monitor [03.07.**]	○	×	○
	Supporting connection to CC-Link IE controller network	2.77F	Extended function OS System monitor [03.12.**]	○	×	×
Network monitor function	Function to monitor the network status of MELSECNET/H, MELSECNET/10, etc.	2.18U	Option OS Network monitor [02.02.**]	○	×	×
	Supporting display of Chinese (Simplified/ Traditional), German, Korean	2.27D	Option OS Network monitor [02.04.**]	○	×	×
	Enables monitoring the status of the CC-Link IE controller network.	2.77F	Option OS Network monitor [03.12.**]	○	×	×
Ladder monitoring function	Function for displaying sequence program loaded to CPU on GOT	2.09K	Option OS Ladder monitor for MELSEC-A [01.02.**] Ladder monitor for MELSEC-Q /QnA [01.02.**] Ladder monitor for MELSEC-FX [01.02.**]	○	×	×
	Supporting display of Chinese (Simplified/ Traditional), German, Korean	2.27D	Option OS Ladder monitor for MELSEC-Q /QnA [02.04.**] Ladder monitor for MELSEC-FX [02.04.**]	○	×	×
	Supporting language switching (Japanese/Korean) for displaying file name and title of the sequence program	2.27D	Option OS Ladder monitor for MELSEC-Q/QnA [02.04.**]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
Ladder monitoring function	Supporting the read of programs/ comments	2.43V	Option OS Ladder monitor for MELSEC-Q/QnA [03.01.**]	○	×	×
	Supporting reading comments from CF cards	2.58L	Option OS Ladder monitor for MELSEC-Q/QnA [03.03.**]	○	×	×
	Supporting monitoring local devices	2.58L		○	×	×
	Supporting connection to Universal model QCPU	2.63R	Option OS Ladder monitor for MELSEC-Q/QnA [03.07.**]	○	×	×
	In searching multiple file programs, the backward search display is possible.	2.73B	Option OS Ladder monitor for MELSEC-Q/QnA [03.09.**]	○	×	×
	With MELSEC-QnA ladder monitor, the currently displayed program automatically reflect the set value of TC changed in the test function.					
	Supporting connection to CC-Link IE controller network	2.77F	Option OS Ladder monitor for MELSEC-Q/QnA [03.12.**]	○	×	×
Intelligent module monitor function	Function to monitor and change the data of intelligent function module buffer memory using a dedicated screen	2.18U	Option OS Intelligent module monitor [02.02.**]	○	×	×
	Supporting connection to CC-Link IE controller network	2.77F	Option OS Intelligent module monitor [03.12.**]	○	×	×
List editor for MELSEC-A	Function for displaying/editing sequence program saved from ACPU with list mode	2.09K	Option OS List editor for MELSEC-A [01.02.**]	○	×	○
List editor for MELSEC-FX	Function to display / edit the sequence program read out from the FXCPU in the list mode	2.18U	Option OS List editor for MELSEC-FX [02.02.**]	○	×	○
	Supporting display of Chinese (Simplified)	2.27D	Extended function OS List editor for MELSEC-FX [02.04.**]	○	×	○
	Supporting display of Chinese (Simplified/ Traditional), German and Korean (GT11 supports display of Chinese (Simplified/Traditional) and Korean)	2.27D	Extended function OS List editor for MELSEC-FX [02.04.**]	○	×	○
Servo amplifier monitor function	Function to monitor the servo amplifier and also to change parameters, execute test run, etc.	2.18U	Option OS Servo amplifier monitor [02.02.**]	○	×	×
Q motion monitor function	Function to execute servo monitor and parameter setting for motion controller CPU (Q series)	2.18U	Option OS Q motion monitor [02.02.**]	○	×	×
	Parameter setting is enabled for Q172HCPU/Q173HCPU.	2.32J	Standard monitor OS [03.00.**]	○	×	×
	Supporting connection to Q17nDCPU	2.63R	Option OS Q motion monitor [03.07.**]	○	×	×
	Enables clearing the SFC error history. (Universal model QCPU only)	2.63R	Option OS Q motion monitor [03.07.**]	○	×	×
	Supporting connection to CC-Link IE controller network	2.77F	Option OS Q motion monitor [03.12.**]	○	×	×

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT 15	GT Soft GOT1000	GT 11
CNC monitor function	Function to monitor the MELDAS that is connected to the GOT	2.18U	Option OS CNC monitor [02.02.**]	○	×	×
	Supporting connection to CNC C70	2.63R	Option OS CNC monitor [03.07.**]	○	×	×
Backup/restore function	Function to back up setting data for controllers and to restore the data to the controllers	2.58L	Extended function OS Backup/Restore [03.07.**]	○	×	×
	Supporting Backup Data Conversion Tool	2.63R	-	○	×	×
	Supporting the trigger backup	2.73B	Extended function OS Backup/Restore [03.09.**]	○	×	×
CNC data I/O function	Function to copy or delete data of the CNC that is connected to the GOT	2.63R	Extended function OS CNC Data I/O [03.07.**]	○	×	×
SFC monitor function	Function to display sequence programs written in the PLC CPU in the SFC diagram format on the GOT	2.77F	Extended function OS GOT Platform Library [03.12.**] Option OS SFC Monitor [03.12.**] GOT Function Expansion Library [03.12.**]	○	×	×
Multi-channel function	Function to monitor multiple controllers with a single unit of GOT	2.18U	Standard monitor OS [02.02.**] Communication driver Use the communication driver, [02.02.**] or later for each connection.	○	×	×
Gateway function	Function for monitoring each controller from one GOT/PC or sending a mail from GOT	2.09K	Option OS Gateway function (Mail) [01.02.**] Gateway function (Server, Client) [01.02.**]	○	×	×
	Supporting the FTP server function	2.18U	Option OS Gateway functionFTP [02.02.**]	○	×	×
	Enables transfer of binary data by the FTP server function.	2.32J	Option OS Gateway (FTP) [03.00.**]	○	×	×
Document display function	Function to display document on the GOT	2.32J	Standard monitor OS [03.00.**] Option OS Document Display [03.00.**]	○	○	×
	Image quality adjustment for documents is possible.	2.43V	Standard monitor OS [03.01.**]	○	○	×
MES interface function	Function to execute data linkage between the control and information systems	2.43V	Standard monitor OS [03.01.**] Option OS MES Interface [03.01.**]	○	×	×
	Oracle 8i, ACCESS2000, ACCESS2003, and MSDE2000 are added to the applicable database.	2.47Z	Standard monitor OS [03.02.**] Option OS MES Interface [03.02.**]	○	×	×
	The trigger buffering function is added. Enables setting [Do not sample] for the sampling setting in the device tag settings.					
	Industrial SQL Server 9.0 and Microsoft SQL Server 2005 are added as an applicable database.	2.58L	Standard monitor OS [03.03.**] Option OS MES Interface [03.03.**]	○	×	×

Appendix 6.2 For GT10

GT Designer2 Version 2.43V or later is applicable to GT1020.
GT Designer2 Version 2.58L or later is applicable to GT1030.

1 Added GOT main unit

Target Models	Version of GT Designer2	Version of OS
GT1020-LBD, GT1020-LBD2, GT1020-LBL	2.43V	-
GT1020-LBDW, GT1020-LBDW2, GT1020-LBLW	2.58L	-
GT1030-LBD, GT1030-LBD2 , GT1030-LBDW, GT1030-LBDW2	2.58L	-

2 Added connection types

○ : Applicable × : N/A - : Applicable (from the first version)

Item	Description	Version of GT Designer2	Version of OS	GT1020	GT1030
CC-Link connection (Via G4)	Supporting connection to CC-Link (Via G4)	2.73B	Standard monitor OS [01.07.**] Communication driver CC-Link(G4)[01.00.**]	○	○
Microcomputer connection	Supporting the data formats of Format 1 and Format 2.	2.47Z	Standard monitor OS [01.02.**] Communication driver Computer[01.02.**]	○	-
OMRON PLC connection	Supporting connection to OMRON PLC	2.47Z	Standard monitor OS [01.02.**] Communication driver OMRON SYSMAC [01.02.**]	○	-
KEYENCE PLC connection	Supporting connection to KEYENCE PLC	2.73B	Standard monitor OS [01.07.**] Communication driver KEYENCE KV-700/1000[01.00.**]	○	○
	Supporting connection to KV-3000 and KV-5000	2.77F	Communication driver KEYENCE KV700/1000 [01.03.**]	○	○
TOSHIBA MACHINE PLC connection	Supporting connection to TOSHIBA MACHINE PLC	2.77F	Communication driver TOSHIBA MACHINE TCmini [01.03.**]	○	○
MATSUSHITA PLC connection	Supporting connection to MATSUSHITA PLC	2.73B	Standard monitor OS [01.07.**] Communication driver MATSUSHITA MEWNET-FP [01.00.**]	○	○
YASKAWA PLC connection	Supporting connection to CP9200SH/MP900 series	2.73B	Standard monitor OS [01.07.**] Communication driver YASKAWA MP [01.00.**]	○	○
	Supporting connection to MP2000/MP900 series	2.73B		○	○
ALLEN-BRADLEY PLC connection	Supporting connection to MicroLogix 1000/1200/ 1500 series.	2.58L	Standard monitor OS [01.04.**] Communication driver AB MicroLogix [01.00.**]	○	○
	Supporting connection to SLC500 series.	2.58L	Standard monitor OS [01.04.**] Communication driver AB SLC 500 [01.00.**]	○	○
SIEMENS PLC connection	Supporting connection to SIEMENS S7-200 series.	2.58L	Standard monitor OS [01.04.**] Communication driver SIEMENS S7-200 [01.00.**]	○	○

(Continued to next page)

Item	Description	Version of GT Designer2	Version of OS	GT1020	GT1030
Inverter connection	Supporting connection to inverter	2.73B	Standard monitor OS [01.07.**] Communication driver FREQROL 500/700 [01.00.**]	○	○
Bar code reader connection	Supporting connection to barcode reader	2.77F	Standard monitor OS [01.08.**]	○	○

3 Added GT Designer2 functions

Item	Description	Version of GT Designer2	Version of OS	GT1020	GT1030
Library workspace	Enables setting the background color of the figures in the Library Editor screen.	2.47Z	-	○	-
Auxiliary setting	Enables setting [Specify the touch area.].	2.77F	-	×	○
Reading BMP or JPEG image data	Enables displaying BMP or JPEG image data reduced to a resolution of 2000 × 1600 or less on GT Designer2.	2.77F	-	○	○
Directly editing comment group	Enables editing the comment group directly in settings for the lamps and touch switches.	2.77F	-	○	○

4 Added common settings/object functions

Item	Description	Version of GT Designer2	Version of OS	GT1020	GT1030
Window screen	Corresponding to the overlap window display and the superimpose display.	2.73B	Standard monitor OS [01.07.**]	○	○
Figure	Supporting piping	2.73B	Standard monitor OS [01.00.**]	○	○
Clock function	The clock data storage to the GD device is possible.	2.73B	Standard monitor OS [01.07.**]	○	○
Numerical Display/ Numerical input	Format String setting is possible.	2.77F	Standard monitor OS [01.08.**]	○	○
ASCII input	The ASCII input can be set.	2.58L	Standard monitor OS [01.03.**]	○	-
Comment Display	The simple comment is added.	2.77F	Standard monitor OS [01.08.**]	○	○
Lamp Display	[Comment Group] can be used.	2.77F	Standard monitor OS [01.08.**]	○	○
Touch switch	Auto repeat can be used.	2.73B	Standard monitor OS [01.07.**]	○	○
	[Comment Group] can be used.	2.77F	Standard monitor OS [01.08.**]	○	○
Graph	The statistics bar graph can be set.	2.58L	Standard monitor OS [01.03.**]	○	-
	The statistics pie graph can be set.	2.58L	Standard monitor OS [01.03.**]	○	-
Alarm history display	Enables selecting whether to set the scrolling comment display suitable for the message display area.	2.63R	Standard monitor OS [01.06.**]	○	○
	Comment group can be used.	2.73B	Standard monitor OS [01.07.**]	○	○
Scrolling alarm display	The scrolling alarm display applicable	2.73B	Standard monitor OS [01.07.**]	○	○

5 Other functions added

Item	Description	Version of GT Designer2	Version of OS	GT1020	GT1030
Installing/ uploading with GT10-LDR	Enables installing or uploading the OS, communication drivers, project data, and others with the GT10-LDR.	2.77F	-	○	○
Installing OS	Enables installing the OS without the OS installation screen of the GOT.	2.77F	Standard monitor OS [01.08.**]	○	○

INDEX

[A]

A list editor 14-1
Addition times reset for maintenance time notification 17-1
  Addition times reset function 17-1
  Display operation of addition times reset 17-1
  Operation of Addition times reset 17-2
Advanced Recipe Information 13-45
Alarm information 13-28
  Alarm information operation 13-30
  Function of alarm information 13-28
  The display operation of alarm information 13-28
Attachment 2-19,8-58
  Applicable attachment 8-58
  Installing procedure 8-58

[B]

Backlight 2-18,19-6
  Backlight replacement 19-6
  Backlight shutoff detection and replacement 19-5
Backup/Restore Settings 11-40
  Drive for backup data 11-40
  Drive for backup setting 11-40
  Max. of backup data 11-40
  Trigger backup setting 11-44
Bar code reader 2-16
Basic operation of settings change 9-11
Basic OS 9-1
Battery 2-17,8-47
  Applicable battery 8-47
  Battery life 8-48
  Battery replacement procedure 8-47
  Battery specifications 8-47
  Battery voltage low detection and battery replacement 19-4
Battery status display 12-1
  GOT internal battery status display 12-6
Boot OS 9-1
Brightness, contrast adjustment 11-12
  Brightness adjustment function 11-12
  Display operation of brightness, contrast 11-12
Buffer circuit cable 2-9
Bus connection unit 2-7,8-1
Bus connector conversion box 2-15
Bus extension connector box 2-15

[C]

CC-Link communication unit 2-7
CC-Link IE controller network communication unit 2-7,8-2
CF card 2-15,8-35
  Applicable CF card 8-35
Clean 15-1
  Cleaning method 19-3
  Display operation of clean 15-1
  Operation of clean 15-2
Cleaning of display section 15-1
Communication detail settings 10-11
  Communication detail settings display operation 10-11
  Communication detail settings functions 10-11
  Display contents of communication detail settings 10-13
  Key word registration, deletion and protection delete 10-14
Communication interface setting 10-1
Communication setting 10-1
  Communication setting contents 10-2
  Communication setting display operation 10-1,10-6
  Communication setting functions 10-1
Communication unit 2-7,8-1
  Applicable communication unit 8-1
  Installing procedure 8-3
Component list 2-2
Connection cables for MITSUBISHI PLCs 2-9

[D]

Daily inspection 19-2
Display and operation settings 11-1
  Display operation of display setting 11-5
  Display setting function 11-31
  Display setting functions 11-2
  Display setting operations 11-6
Drawing check 14-7
  Display operation of drawing check 14-7
  Drawing check function 14-7
  Drawing check operation 14-8
Drawing software 2-19

[E]

Error message and system alarm 20-17
  List of error message/system alarm 20-19
Ethernet communication unit 2-7,8-1
Explanation of the GOT model name 2-2
Explanation of the option model name 2-3
External dimensions App-1
External I/O unit 8-26
  Applicable external I/O unit 8-26
  Installation procedure 8-26

[F]

File display and copy 13-1
  Capacity confirmation of the project data downloading location 13-6
  Data type and the storage location 13-2
  Display file 13-7
  Drive name allocation 13-1

OS version confirmation 13-4
Font check 14-12
Display operation of font check 14-12
Font check function 14-12
Font check operation 14-13

[G]

General specifications 3-1
GOT data package acquisition 13-110
GOT self check 14-1
GOT set up 11-1
GOT Start Time 14-34
Display of GOT start time 14-35
Display operation of GOT start time 14-34
GOT start time function 14-34
GOT-to-GOT connection cable 2-8
GOT-to-GOT long distance connection cable 2-8
GT Designer2 2-19

[H]

Hard copy information 13-36
The display operation of hardcopy information 13-36
The function of hardcopy information 13-36
The operation of hardcopy information 13-38

[I]

I/O check 14-16
Display operation of I/O check 14-17
I/O check function 14-16
I/O check operation 14-18,14-22
Installation of boot OS and standard OS 18-1
Boot OS and standard OS installation using CF card 18-4
Boot OS and standard OS required for installation 18-2
Prior preparations for installing boot OS and standard OS 18-3
Program / data control function 18-6
The 2-point presses installation function 18-5
When installing the different version of boot OS, standatd OS 18-8
Interface converter unit 2-7,8-2

[L]

Ladder monitor 14-1
Large-size CPU extension cable 2-8
Logging information 13-68,13-93

[M]

Maintenance time notification setting 16-1
Display operation of maintenance timimg setting 16-3
Maintenance time notification function 16-2
Operation of maintenance time notification 16-4
MELSECNET/10 communication unit 2-7,8-2
Memory card adaptor 2-16,8-44
Applicable memory card adaptor 8-44
Installing procedure of the CF card into a memory card adaptor 8-44
Memory card format 13-42
Display operation of memory card format 13-42
Format operation of memory card 13-43
Memory card format 13-42
Memory check 14-4
Display operation of memory card 14-4
Memory check function 14-4
Memory check operation 14-5
Memory information 13-82
Multi color display board 2-17,8-59
Applicable multi-color display board 8-59
Installing procedure of the multi-color display board 8-60

[O]

Operation of system alarm 14-33
Display operation of system alarm 14-32
System Alarm Display 14-32
System alarm display function 14-32
Operation settings 11-14
Display operation of display setting 11-15
Operation setting functions 11-14
Setting operation of operation 11-16
Operator Information Management 14-36
Option 2-7
Option function board 2-16,8-45
Applicable option function board 8-45
Installing procedure of the option function board 8-45
OS Information
Display operation of OS information 13-9
OS information 13-8
Function of OS information 13-8
Operation of OS information 13-11
Overall configuration 2-1

[P]

Packing list A-27
Part names and settings of the GT1565 4-9
Part names and settings of the GT1575 4-6
PC connection cable 2-20
Performance specifications 3-2
Periodic inspection 19-2
Power supply specifications 3-14
Power supply wiring
Grouding 7-6
Printer unit
Installing procedure 8-19
Printer unit type 8-19
Program/data control 13-1
Project information 13-16
Display operation of project information 13-17
Function of OS information 13-16
Operation of project information 13-19
Protective cover for oil 8-51
Applicable protective cover for oil 8-51

Installation procedure 8-51
Protective sheet 2-18,8-49
Applicable protective sheet 8-49
Installing procedure 8-50

[Q]

Q extension cable 2-8
Q long distance connection cable 2-8
Q/QnA ladder monitor setting 11-26
QCPU (Q mode) bus connection cable 2-8
QnA/ACPU/Motion controller (A series) bus connection cable 2-8

[R]

RFID controller 2-16
Rough pre-operation procedure 1-5
RS-232 cable 2-10
RS-422 cable 2-10
RS-422 conversion unit 2-15,8-18
Applicable RS-422 conversion unit 8-18
Installing procedure 8-18

[S]

Screen data transfer cable 2-20
Security level change 11-18
Security change display operation 11-18
Security level change functions 11-18
Security level change operation 11-19
Small-size CPU extension cable 2-8
Small-size CPU long distance connection cable ... 2-8
Sound output unit 8-28
Applicable sound output unit 8-28
Installation procedure 8-28
Special Data Information 13-84
Stand 2-17,8-56
Applicable stand 8-56
Installing procedure 8-56
System configuration 2-1
System monitor 14-1

[T]

Third party PLC connection cable 2-4
Time setting and display 12-1
Clock setting operations 12-3
Display operation of clock display and setting 12-2
Time setting and display functions 12-1
Touch panel calibration 11-23
Touch panel check 14-14
Display operation of touch panel check 14-14
Touch panel check function 14-14
Touch panel check operations 14-15
Transparent function setting 11-29
Transportation Precautions App-20
Troubleshooting
Troubleshooting in bus connection 20-14

[U]

Usage condition of utility function App-16
USB environmental protection cover 8-54
Applicable USB environmental protecton cover 8-54
Installing procedure 8-54
Utility basic configuration 9-10
Utility call key setting 11-20
Utility call key display operation 11-20
Utility call key setting function 11-20
Utility call key setting operation 11-21
Utility call key settings 11-31,11-34,11-38
Utility call key setting display operations 11-32,11-38
Utility call key setting function 11-34,11-38
Utility call key setting operations 11-33,11-36,11-37,11-39
Utility display 9-5
Display operation of main menu 9-7
Main menu 9-5
Password 9-8
System message switch button 9-5
Utility execution 9-1
Utility function list 9-2

Memo

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company. However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place. Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

(1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(2) Even within the gratis warranty term, repairs shall be charged for in the following cases.

1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
2. Failure caused by unapproved modifications, etc., to the product by the user.
3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

6. Product application

(1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.

(2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the graphic operation terminal applications.
In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation equipment for recreation and amusement, and safety devices, shall also be excluded from the graphic operation terminal range of applications.
However, in certain cases, some applications may be possible, providing the user consults the local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at our discretion.

Microsoft, Windows, Windows NT, Windows Vista are registered trademarks of Microsoft Corporation in the United States and other countries.
Adobe and Adobe Reader are registered trademarks of Adobe Systems Incorporated.
Pentium and Celeron are a registered trademarks of Intel Corporation in the United States and other countries.
Ethernet is a trademark of Xerox Co., Ltd. in the United States.
MODBUS is a trademark of Schneider Electric SA.
Other company and product names herein are either trademarks or registered trademarks of their respective owners.

GRAPHIC OPERATION TERMINAL

GOT1000

GT15 User's Manual

MODEL	GT15-U(SHO)-E
MODEL CODE	1D7M23
SH(NA)-080528ENG-M(0802)MEE	

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN

When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.

Specifications subject to change without notice.